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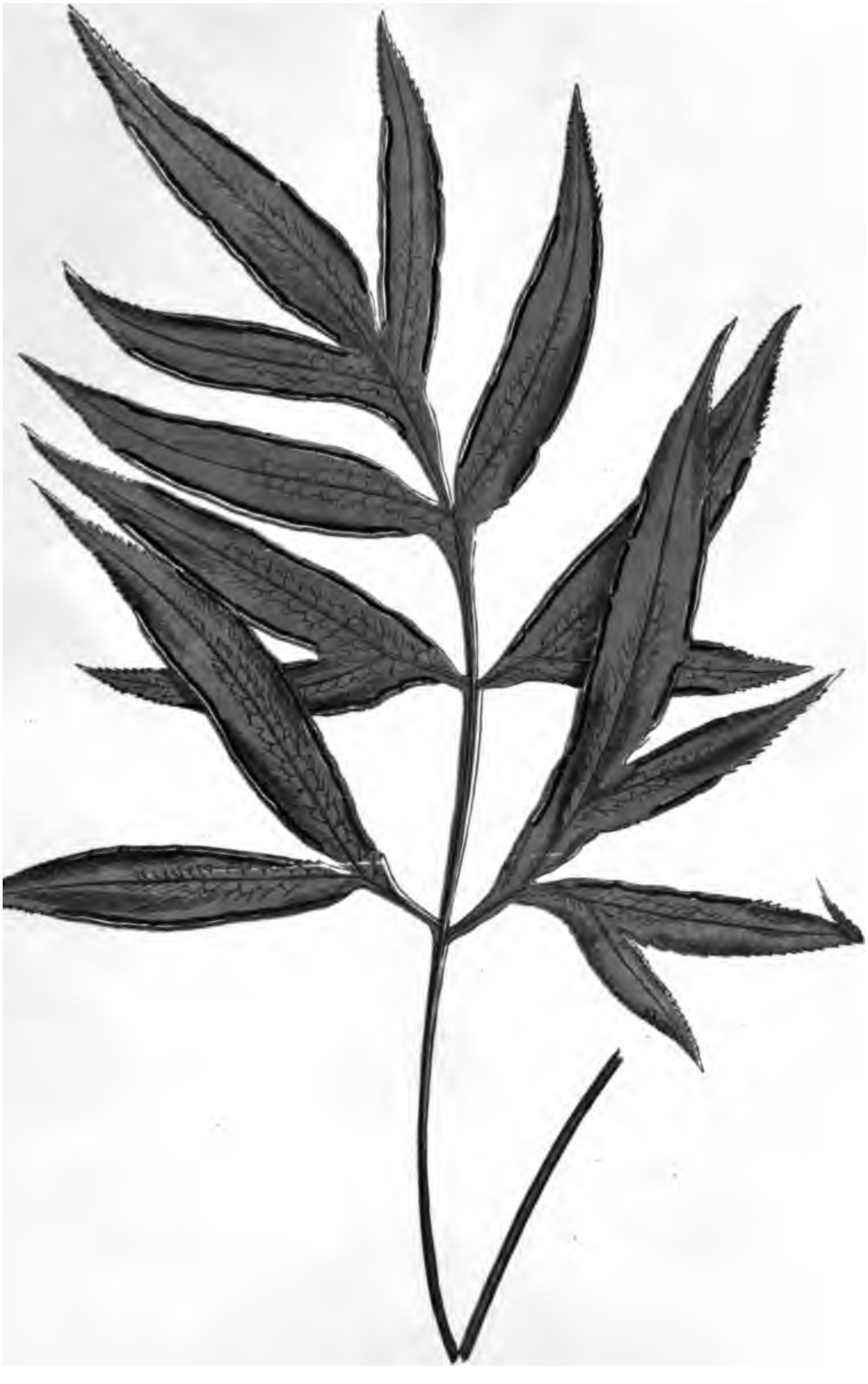

PTERIS DENTICULATA.

[illegible]

FERNS:

BRITISH AND EXOTIC.

VOLUME IV.

CONTAINING

PTERIS, IN CONCLUSION.
HYPOLEPIS.
CHEILANTHES.
DOODIA.
BLECHNUM.
WOODWARDIA.
STENOCHLÆNA.
BRAINEA.
LOMARIA.

BY

E. J. LOWE, ESQ., F.R.A.S., F.G.S., F.L.S., F.Z.S., M.B.M.S.,
Hon. Mem. Dublin Nat. Hist. Soc., Mem. Geolog. Soc. Edin.,
Corr. Mem. Lyceum Nat. Hist., New York, Corr. Mem. Manchester Lit. and Phil. Soc., etc.

LONDON:
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M DCCC LXIII.

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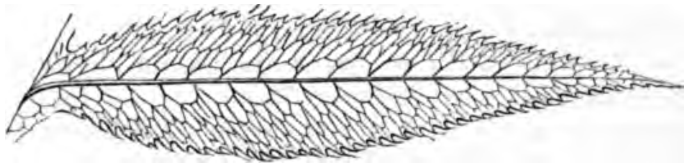
FERNS;

BRITISH AND EXOTIC.



Pinna of mature Frond—upper side.

PTERIS DENTICULATA.

SWARTZ. HOOKER AND GREVILLE.

PLATE I. VOL. IV.

Litobrochia denticulata,	PRESL. MOORE AND HOULSTON.
" "	SMITH.
Pteris Brasiliensis,	RADDI.

Pteris—Brake. *Denticulata*—Toothed.

IN THE SECTION LITOBROCHIA OF AUTHORS.

A DELICATE species, rather difficult to manage, and requiring a hot-house for its cultivation.

An evergreen stove Fern.

Native of Brazil.

Introduced into England in 1824.

The fronds, which are triangular in form, are glabrous, the basal branches sub-pinnate, with the inferior segments bipartite, above pinnate, with the inferior segments divided.

Fronds oblong, acuminate, and decurrent at the base; margin serrate, with spinulose teeth. Terminal, and adherent to a fasciculate rhizoma.

Sterile fronds broader than the fertile fronds; fertile fronds erect, and rising above the sterile fronds.

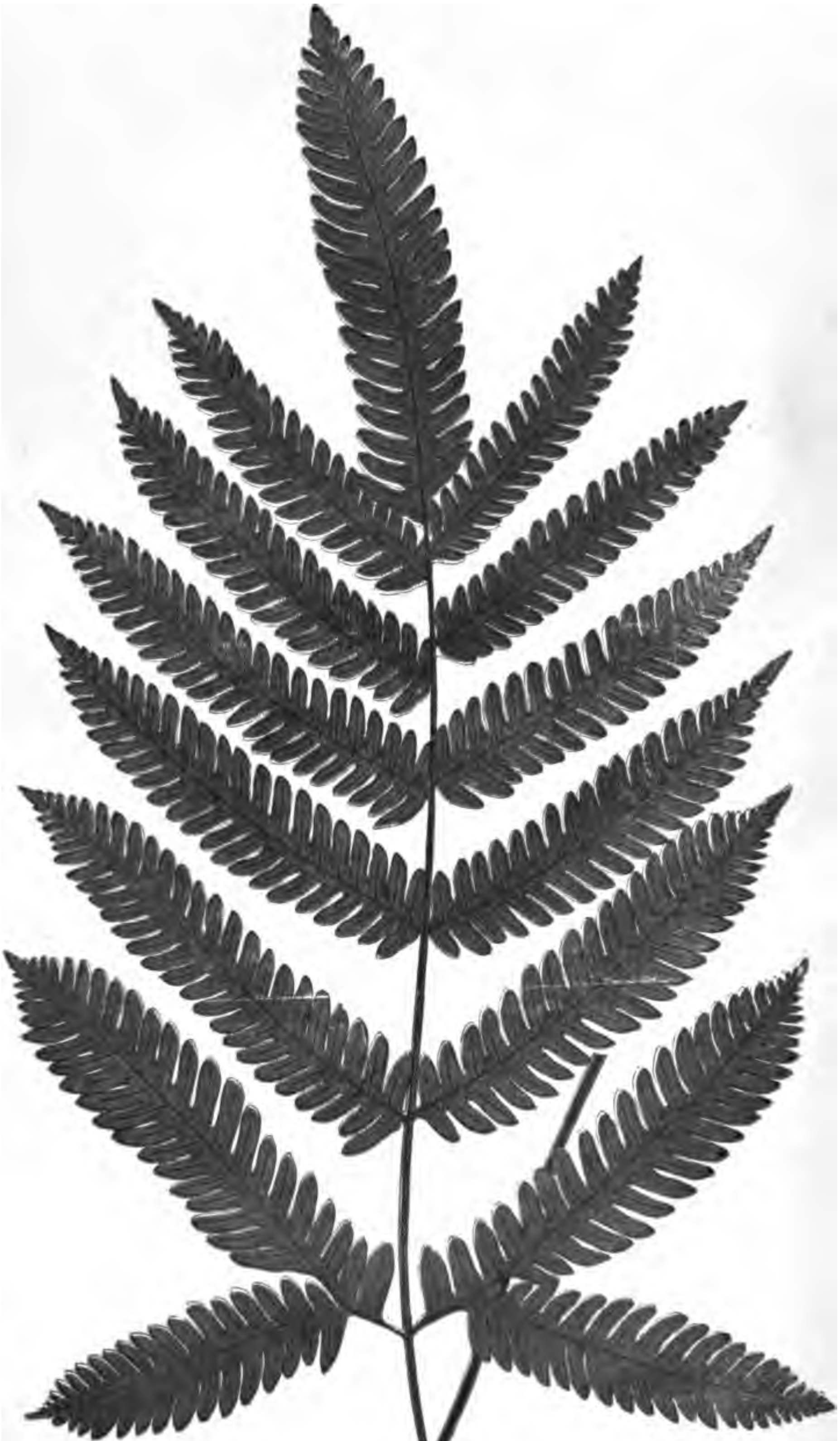
Sori linear and continuous.

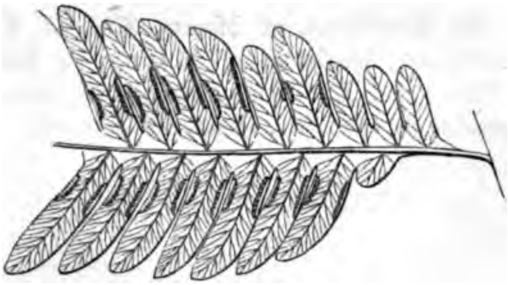
Length of frond from twelve to eighteen inches.

For plants my thanks are due to Sir Oswald Mosley, Bart., of Rolleston Hall, near Burton-on-Trent.

It may be procured of Messrs. Veitch, of Chelsea; Booth, of Hamburg; Sim, of Foot's Cray; A. Henderson, of Pine-apple Place; E. G. Henderson, of St. John's Wood; and Rollisson, of Tooting.

The illustration is from a plant in my own collection.





Portion of Pinna of mature Frond—under side.

PTERIS FELOSMA.

J. SMITH. MOORE AND HOULSTON.

PLATE II. VOL. IV.

Pteris—Brake. *Felosma*—Heavy swelling.

A PLEASING large-growing species; easily cultivated.

An evergreen stove Fern.

Introduced into England in 1822.

Native of Jamaica.

The fronds, which are triangularly-elongate in form, are glabrous and pinnate, the pinnæ being linear-lanceolate in form, profoundly pinnatifid, with the apex entire and caudate; petiolulate. The basal pair bipartite; segments linear, obtuse, slightly falcate, and entire. Costa on the upper side spinulose.

Stipes from one to two feet long, scaly near the base.

Fronds terminal; rhizoma erect and fasciculate.

Sori linear.

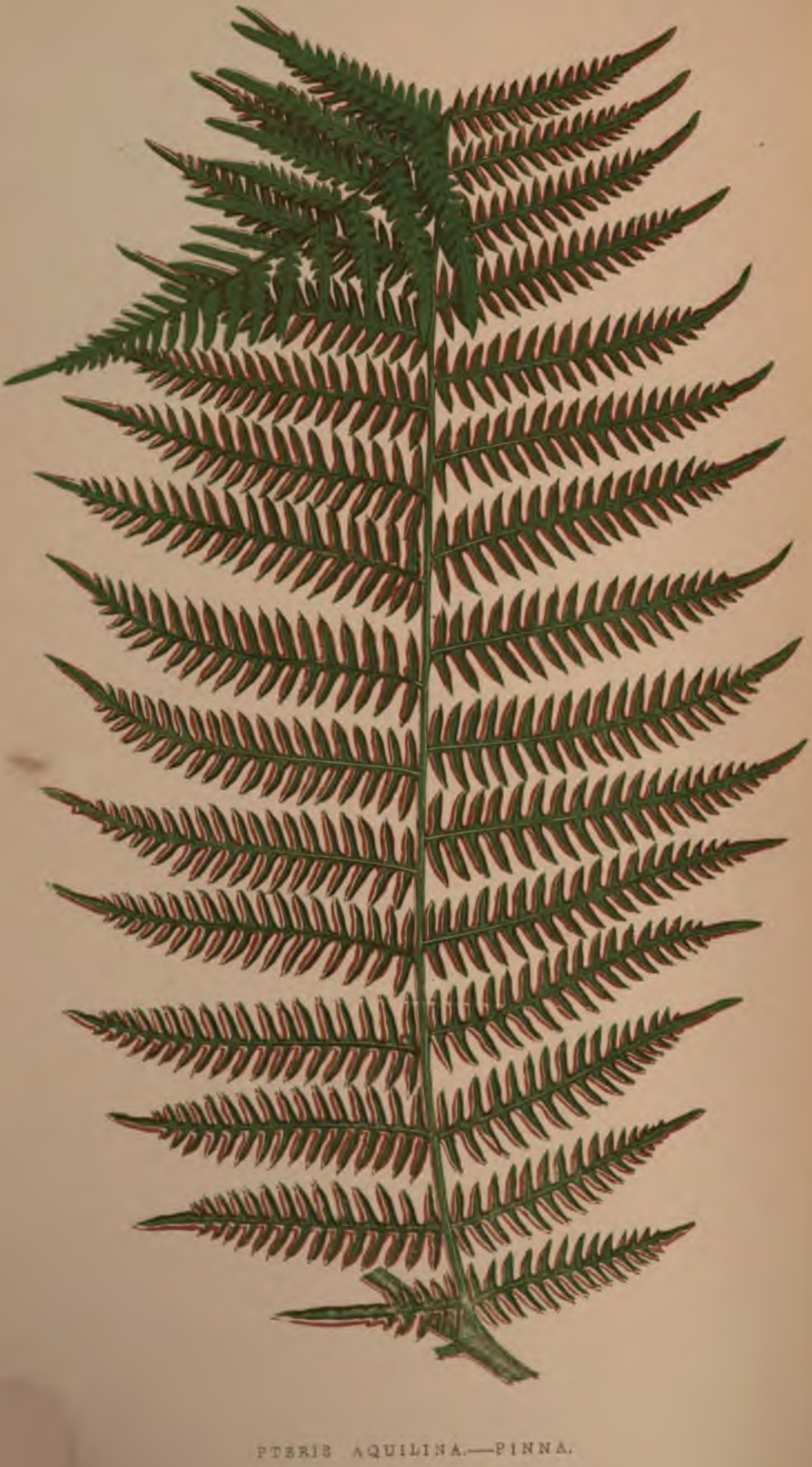
Veins forked.

Length of frond from thirty-five to fifty inches; colour a dull green.

For fronds I am indebted to Mr. Joseph Henderson, of Wentworth.

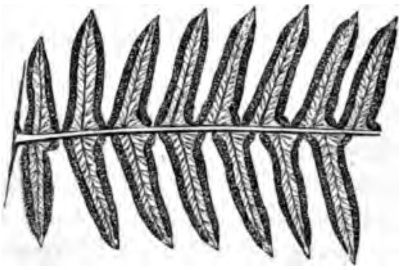
It is in the Catalogues of Messrs. Sim, of Foot's Cray; Veitch, of Chelsea; Rollisson, of Tooting; A. Henderson, of Pine-apple Place; and E. G. Henderson, of St. John's Wood.

The illustration is from Mr. Henderson's frond.



PTERIS AQUILINA.—PINNA.

III—Vol. 4.



Portion of Pinna of mature Frond—under side.

PTERIS AQUILINA.

**LINNÆUS. BOLTON. SMITH. HOOKER AND ARNOTT.
BABINGTON. DEAKIN. NEWMAN. SOWERBY.
MOORE. SCHKUHR. FEE.**

PLATE III. VOL. IV.

Pteris borealis,	SALISBURY.
“ *fœmina,*	GRAY.
“ *caudata,*	LINK, (*not* LINNÆUS.)
“ *brevipes,*	TAUSCH.
“ *nudicaulis,*	GULDENSTADT.
“ *recurvata,*	WALLICH.
“ *firma,*	WALLICH.
“ *terminalis,*	WALLICH.
“ *Wightiana,*	WALLICH.
“ *excelsa,*	BLUME.
“ *lanuginosa,*	BORY.
“ *villosa,*	FEE.
“ *capensis,*	THUNBERG.
Allosorus aquilinus,	PRESL.
“ *tauricus,*	PRESL.
“ *recurvatus,*	PRESL.
“ *lanuginosus,*	PRESL.
“ *villosus,*	PRESL.
“ *Hottentottus,*	PRESL.

Cincinalis aquilina,	GLEDITSCH.
Eupteris aquilina,	NEWMAN.

Pteris—Brake.	*Aquilina*—Eagle.

THE Common Brake, or as it is frequently called Bracken, is a common indigenous species.

It extends throughout Europe; found in China, Sitka, Kamtschatka, Siberia, India, Malaya, Cape of Good Hope, Mauritius, Bourbon, Sierra Leone, Senegambia, Fernando Po, Algiers, Teneriffe, Madeira, California, Guatemala, Mexico, Veraguas, Sandwich Islands.

Fronds usually bi-tripinnate, often triangular in form, being more elongate if larger fronds. Pinnæ ovate, opposite, frequently distant; secondary pinnæ lanceolate; pinnulets sessile, mostly entire.

Veins simple or forked.

Sori marginal and linear. Indusium membranaceous.

Rhizoma creeping.

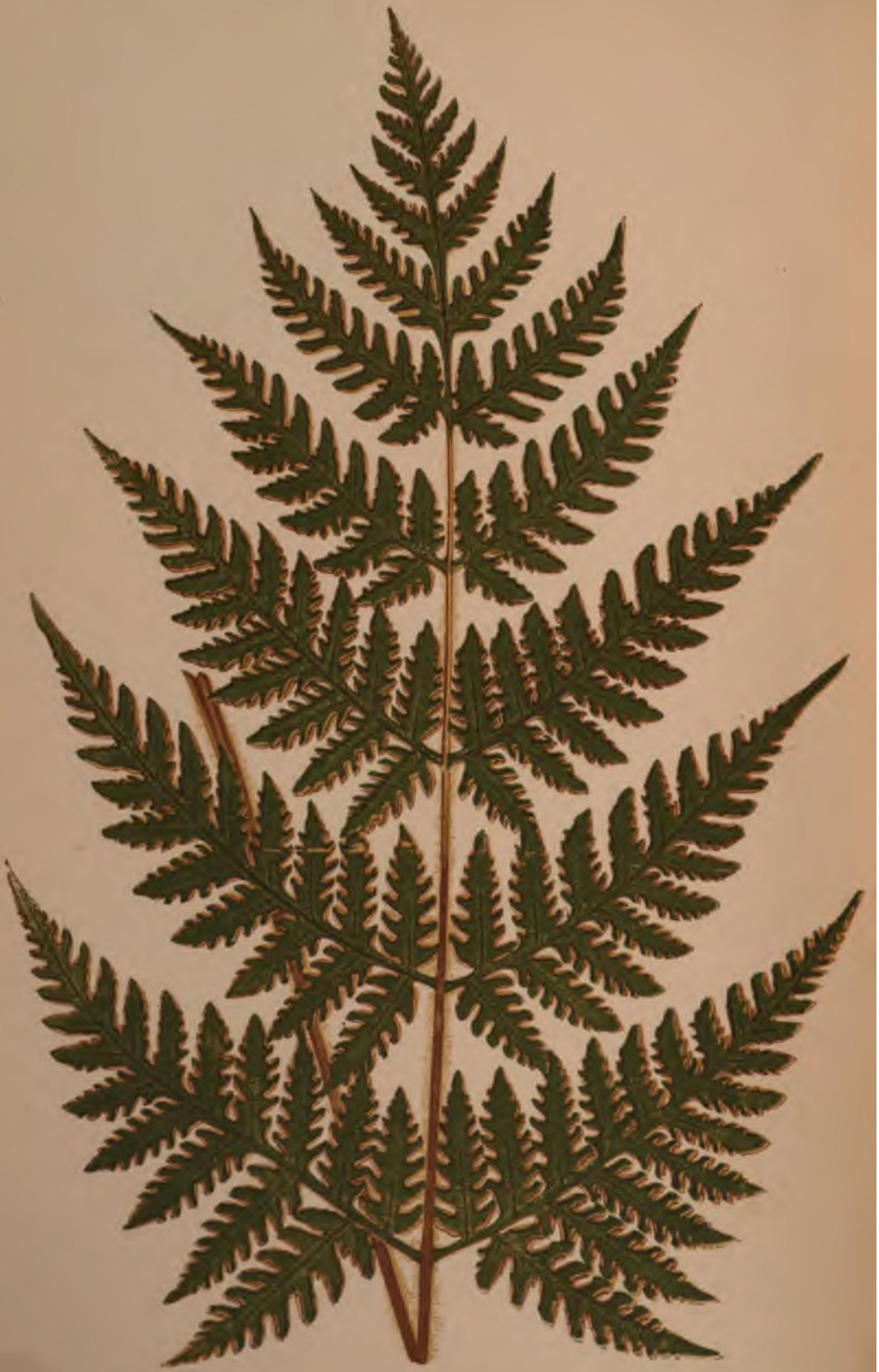
Mr. Moore describes four varieties:—

1.—*Vera.* With secondary pinnules deeply pinnatifid.
2.—*Integerrima.* Margin entire.
3.—*Crispa.* Undulate or waved.
4.—*Multifida.* Multifid.

Length of frond from six inches to ten feet.

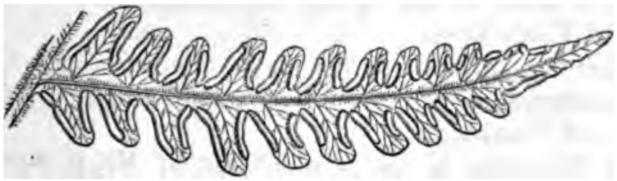
The Bracken is used for many purposes, but more especially as a substitute for straw, as a litter for cattle, and for thatching. It may be procured anywhere, yet will not bear transplanting except in winter.

The illustration is from a plant in the author's collection at Highfield House.



PTERIS HIRSUTA.

IV—VOL. I.



Portion of mature Frond—under side.

PTERIS HIRSUTA.

J. SMITH. MOORE AND HOULSTON.

PLATE IV. VOL. IV.

Pteris laciniata,	WILLDENOW. PRESL.
" "	J. SMITH. FEE. SPRENGEL.
Lonchitis hirsuta,	LINNÆUS. PLUMIER.

Pteris—Brake. *Hirsuta*—Hairy.

AN interesting and very distinct species, having membranous fragile fronds.

An evergreen stove Fern.

Native of Jamaica and the West Indies.

The form of the frond is triangularly-elongate, bipinnate, or sub-bipinnate, and exceedingly hirsute. Pinnæ linear-lanceolate, opposite, pinnatifid, and in some degree drooping. Rachis winged. Pinnules linear-oblong, acuminate, and pinnatifid; segments oblong-obtuse, alternate, and somewhat falcate; apex rounded. Veins forked.

Sori linear, continuous, and intra-marginal. Indusium sinuous and fringed.

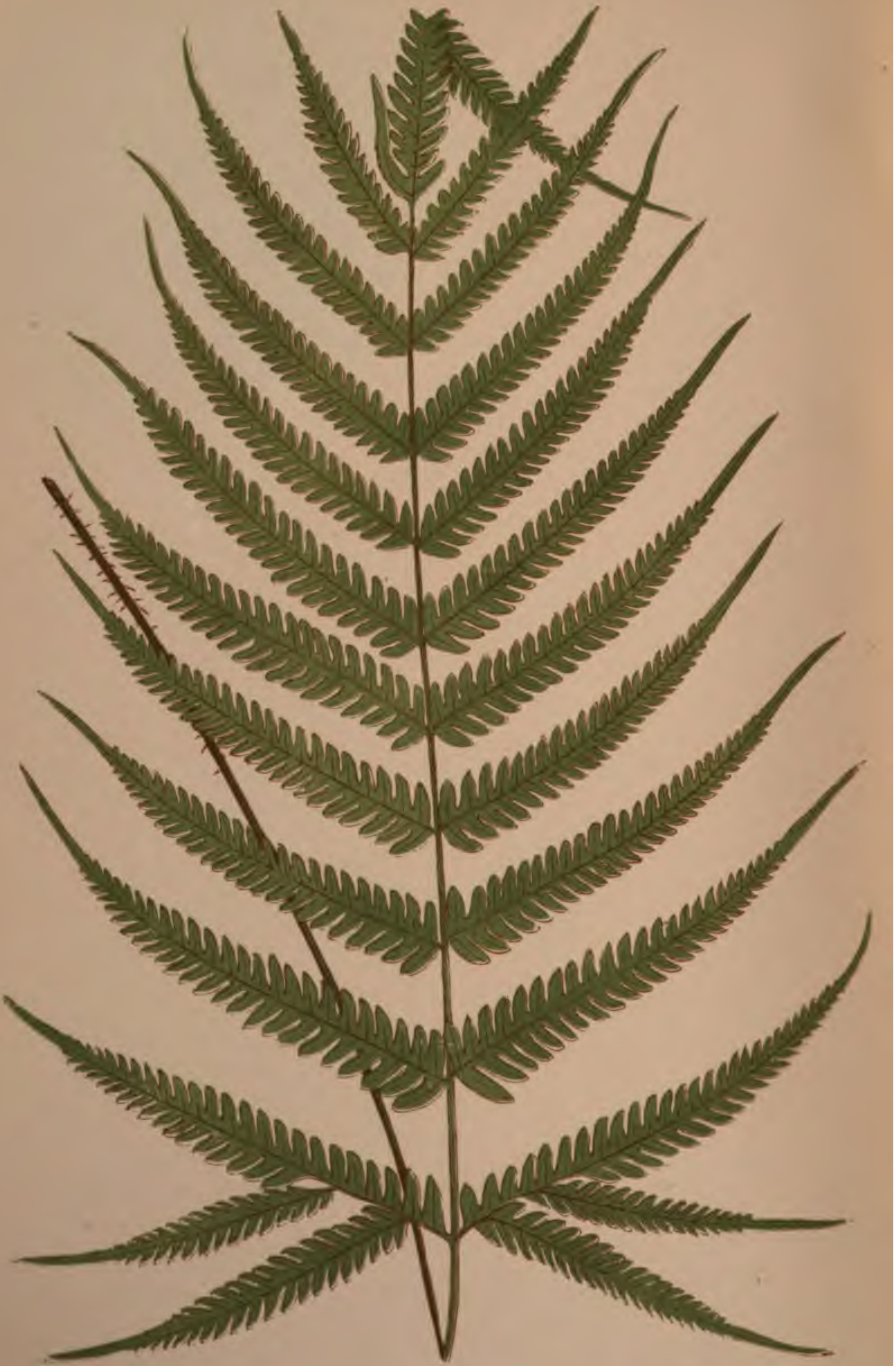
Stipes lateral, thick, succulent, and adherent to a stout creeping rhizoma.

Length of frond from twenty-four to sixty inches, width from ten to thirty inches; colour light green.

For a frond of this species my thanks are due to Mr. R. Sim, of Foot's Cray.

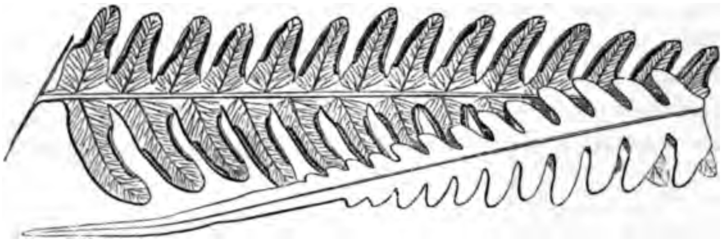
It can be procured of Messrs. R. Sim, of Foot's Cray; E. G. Henderson, of St. John's Wood; Rollisson, of Tooting; and Booth, of Hamburg.

The illustration is from a frond sent by Mr. R. Sim.



PTERIS SULCATA.

V—VOL. 4.



Pinna of mature Frond—under side.

PTERIS SULCATA.

LINK. J. SMITH. MOORE AND HOULSTON. MEYER. KUNZE.

PLATE V. VOL. IV.

Pteris nemoralis, LINK, (*not of* WILLDENOW.)

Pteris—Brake. *Sulcata*—Furrowed.

THIS species closely resembles *Pteris felosma* in appearance, yet is always more dwarf, and is destitute of the strong odour which is a character so marked in *P. felosma.*

An evergreen stove Fern.

Native of Jamaica and Brazil.

Introduced into the Royal Gardens, Kew, in the year 1841.

The fronds, which are glabrous, are triangularly-elongate in form, pinnate, the pinnæ being linear-lanceolate, petiolulate, and profoundly pinnatifid. Apex entire and caudate. The basal pinnæ bipartite. Segments linear, entire, obtuse, and sub-falcate. The upper side of the costa spinulose.

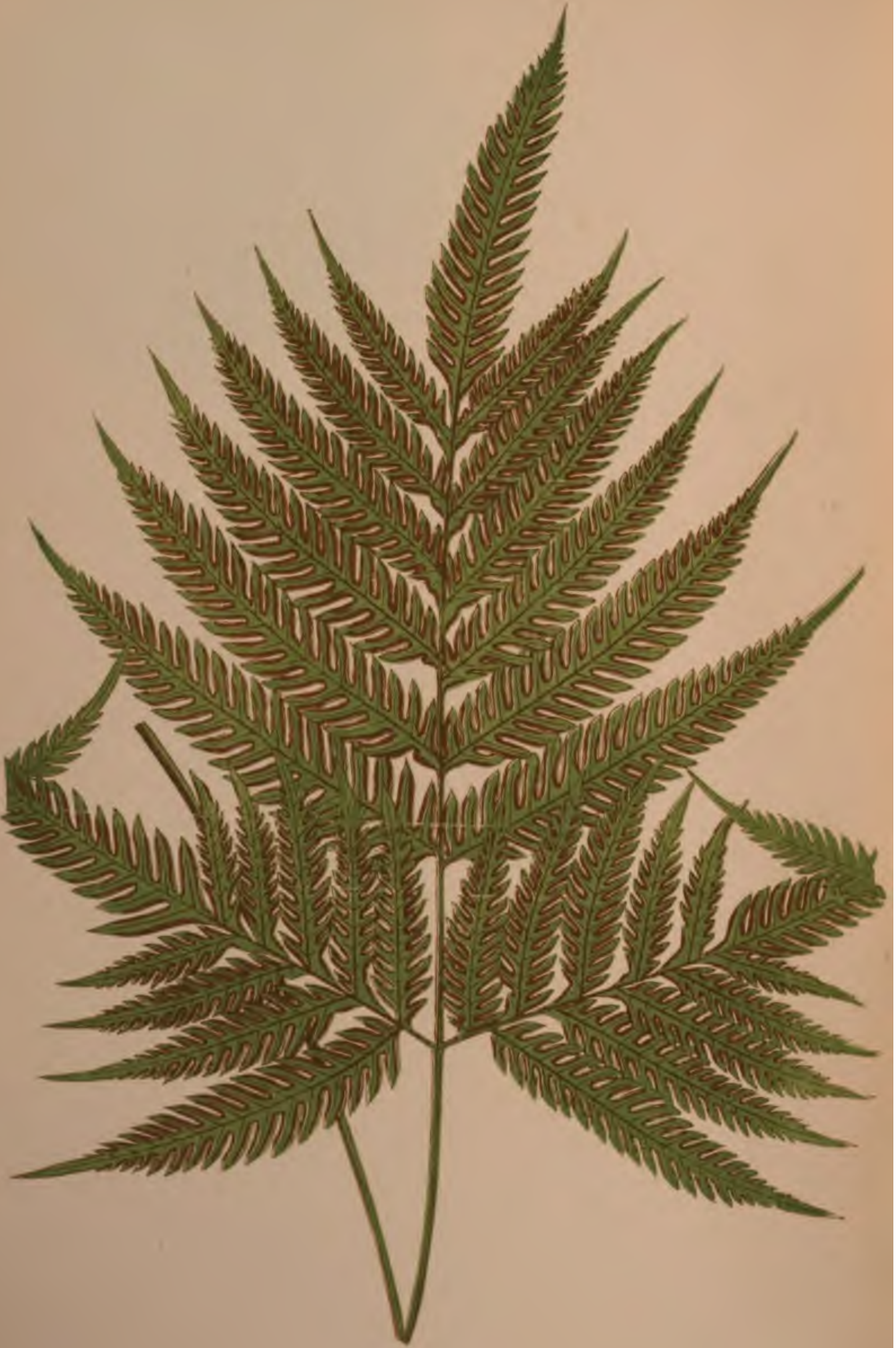
Stipes eighteen inches in length; base scaly and terminal, being adherent to an erect fasciculate rhizoma.

Length of frond three feet; colour deep green.

For a frond my thanks are due to Mr. Joseph Henderson, of Wentworth.

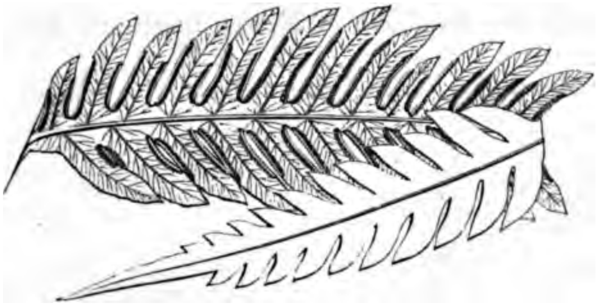
It is in the Catalogues of Messrs. Kennedy, of Covent Garden; Masters, of Canterbury; Rollisson, of Tooting; E. G. Henderson, of St. John's Wood; Stansfield, of Todmorden; and Sim, of Foot's Cray.

The illustration is from a frond sent by Mr. J. Henderson.



PTERIS LATA.

VI—VOL. I.



Pinna of mature Frond - under side.

PTERIS LATA.

LINK. J. SMITH. MOORE AND HOULSTON. KUNZE.

PLATE VI. VOL. IV.

Pteris flabellata var., J. AG.

Pteris—Brake. *Lata*—Broad.

A HANDSOME evergreen stove Fern.

Native of Brazil.

Introduced into the Royal Gardens, Kew, from the Royal Berlin Gardens, in the year 1841.

Fronds glabrous, deltoid, and three-branched. Branches drooping and pinnate; pinnæ linear-lanceolate, profoundly pinnatifid, and petiolulate or decurrent at the inferior base. Apex caudate and entire; segments linear-acuminate; apex spinuoso-serrate and repand. Upper side of the costa spinulose.

Rhizoma creeping.

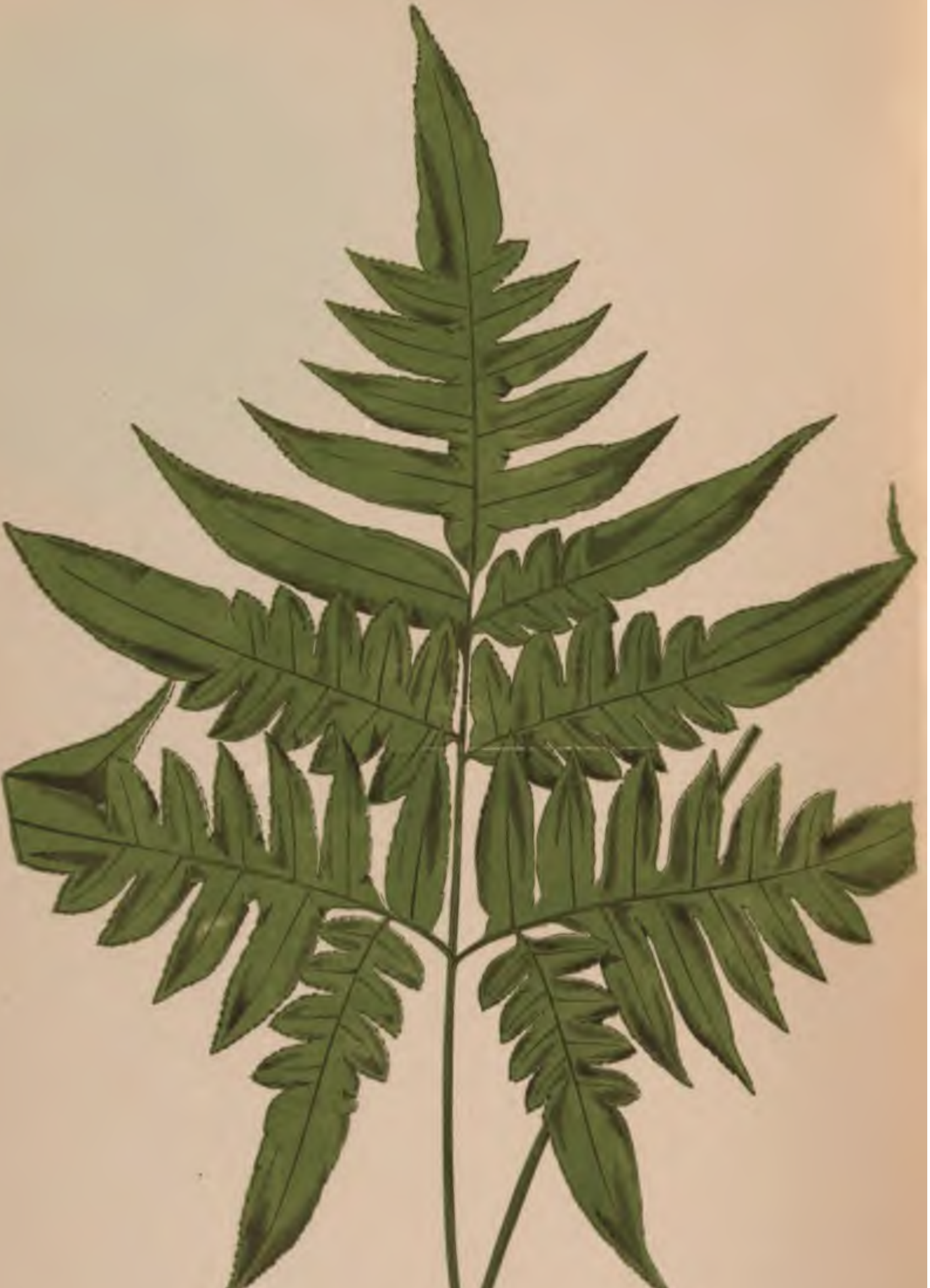
Sori linear.

Length of frond from thirty to thirty-five inches; colour bright green.

For a frond of *Pteris lata* I am indebted to Mr. Joseph Henderson, of Wentworth.

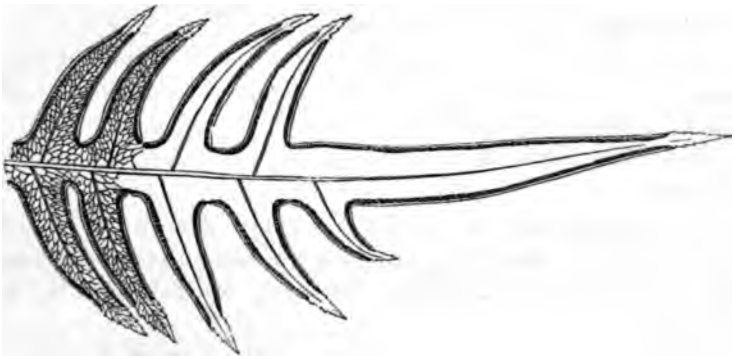
It is in the Catalogue of Messrs. Booth and Son, of Hamburg.

The illustration is from Mr. J. Henderson's frond.



PTERIS MACROPTERA.

VII—Vol. I.



Portion of Pinna of mature Frond—under side.

PTERIS MACROPTERA.

LINK.

PLATE VII. VOL. IV.

Litobrochia macroptera,	J. SMITH.
" *intermedia,*	PRESL.
Pteris intermedia,	KAULFUSS.

Pteris—Brake.	*Macroptera*—Large-winged.

IN THE SECTION LITOBROCHIA OF AUTHORS.

THE *Pteris macroptera* is a distinct handsome species, well worthy of being generally cultivated, yet seldom to be met with in collections.

The form of the frond is triangular-elongate, bipinnatifid below, and pinnatifid above; the pinnæ profoundly pinnatifid. The pinnæ are triangularly elongate below, becoming more elongate above. Pinnæ opposite; apices attenuated; margin serrate.

Veins reticulated.

Rhizoma upright, or slightly creeping, and covered with brown scales.

Stipes and rachis destitute of scales.

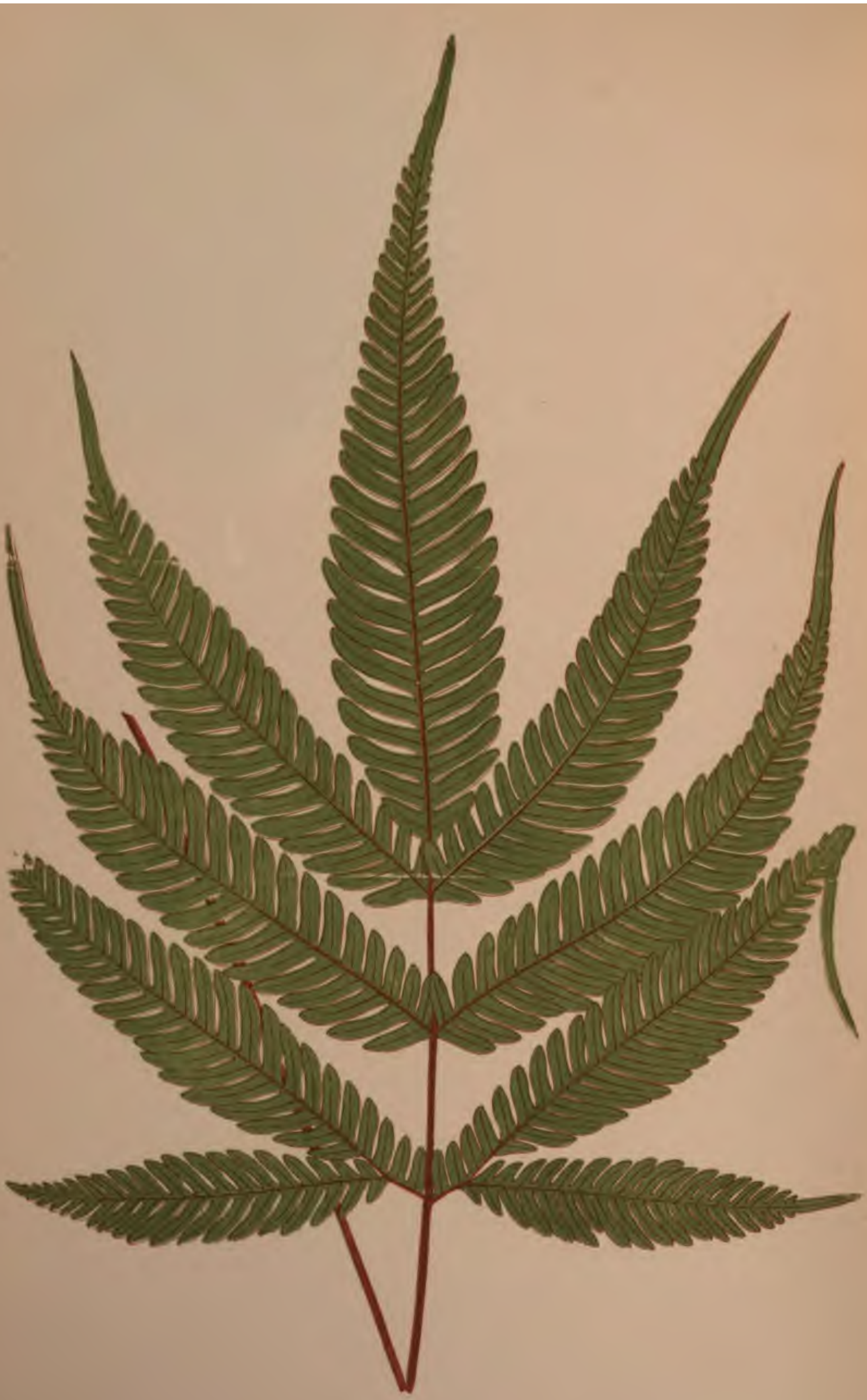
Usual length of frond twenty-four inches, of which the lower ten inches are naked. Usual breadth eighteen inches; colour a heavy green.

The fronds are stout in substance, and more or less erect in habit.

For a plant of this species I am indebted to Mr. Stratton, Curator of the Cambridge Botanic Gardens, and for fronds to M. Schott, of the Imperial Gardens, of Schonbrünn, near Vienna.

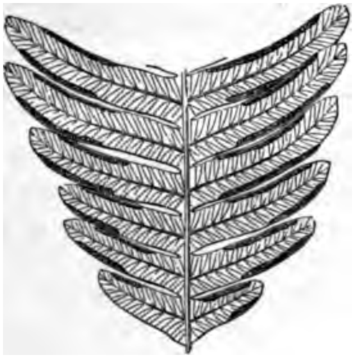
It does not appear to be in any of the Fern Catalogues.

The illustration is from a plant in my own collection.



PTERIS ASPERICAULIS.

VIII.—VOL. I.



Portion of mature Frond—under side.

PTERIS ASPERICAULIS.

WALLICH. J. SMITH.

PLATE VIII. VOL. IV.

Pteris—Brake. *Aspericaulis*—Rough-stalked.

ONE of the most beautiful Ferns, being dwarf and compact in habit, and very conspicuous in colour. Discovered by Dr. Wallich.

An evergreen stove Fern.

Native of India.

Fronds glabrous, pinnate, the lowermost pinnæ bipartite, nearly sessile, and opposite; pinnæ deeply pinnatifid or pinnate, attenuated, and adnate towards the apex; segments linear, falcate, and decurrent at the base, rather obtuse, slightly crenulate, and covered on the under side with minute white dots.

Veins forked or simple.

Stipes and costa purplish when young, the former rough.

Fronds terminal, on an upright rhizoma.

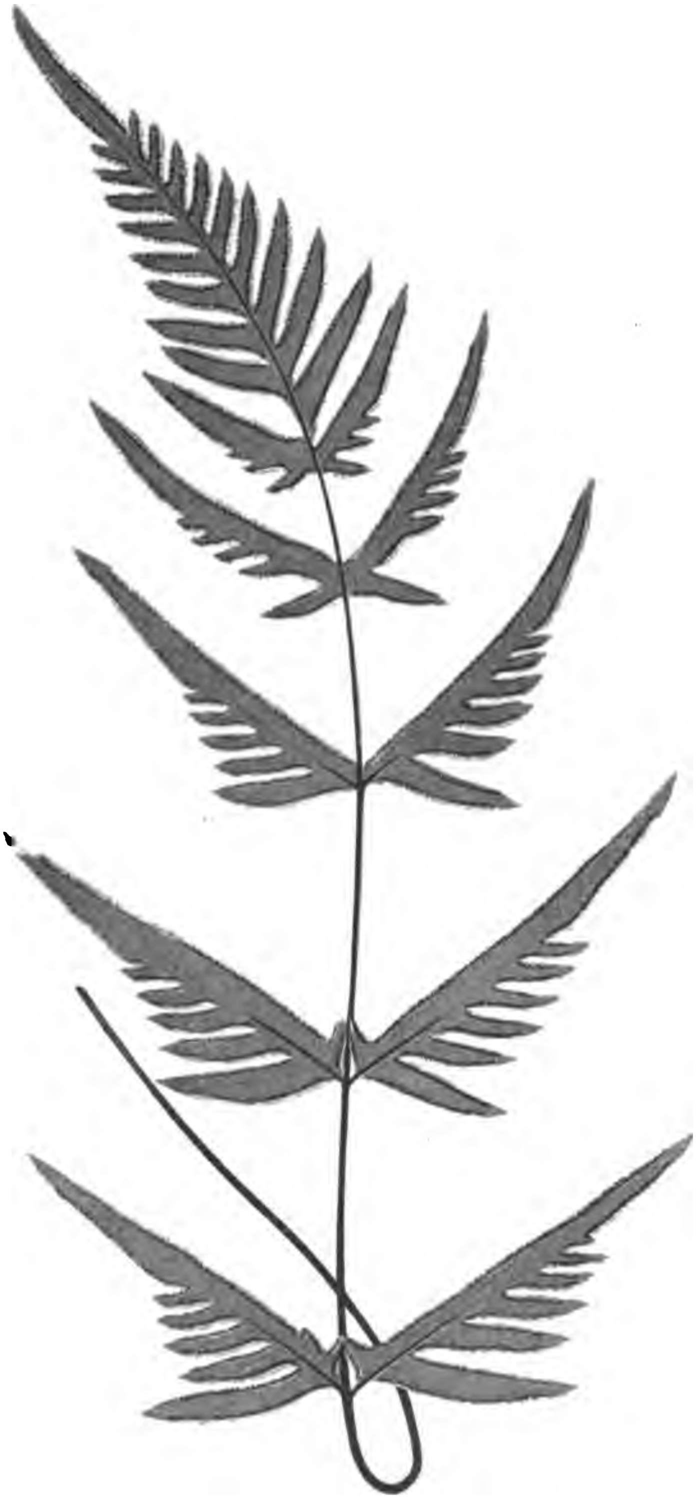
Sori chiefly on the middle portions of the segments.

Length of frond about eighteen inches.

For plants I am indebted to Mr. Pass, gardener to Mr. Brocklehurst, of The Fence, near Macclesfield, and to Messrs. Veitch, of Chelsea; and for fronds to Mr. Joseph Henderson, of Wentworth; Mr. R. Sim, of Foot's Cray; and to Mr. Gray, of St. Thomas', Exeter.

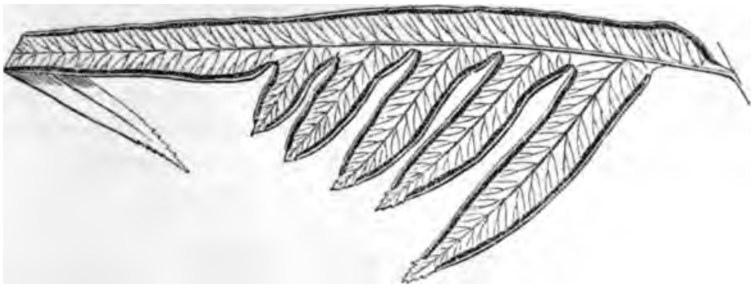
It is in the Catalogues of Messrs. Veitch, of Chelsea; E. G. Henderson, of St. John's Wood; Rollisson, of Tooting; A. Henderson, of Pine-apple Place; Stansfield, of Todmorden; and Cooling, of Derby.

The illustration is from a plant in my own collection.



TERIS SEMIPINNATA.

IX—Vol. 4



Pinna of mature Frond—under side.

PTERIS SEMIPINNATA.

LINNÆUS. J. SMITH. KUNZE. PRESL. FEE. OSBECK.
SCHOTT.

PLATE IX. VOL. IV.

Pteris flabellata,	SCHKUHR. *(Not of* THUNBERG *or* KUNZE.)
" *demidiata,*	WILLDENOW. BLUME.
" *alata,*	LAMARCK. HOUTTUYN.

Pteris—Brake. *Semipinnata*—Partly-pinnate.

A SINGULAR-LOOKING upright-growing species.

An evergreen stove Fern.

Native of the East Indies, China, Malayan Archipelago, and Java.

Fronds semipinnate, erect, lengthy, and smooth. Pinnæ opposite, or sub-opposite below, alternate above; pinnate on one side only of the pinnæ; decurrent.

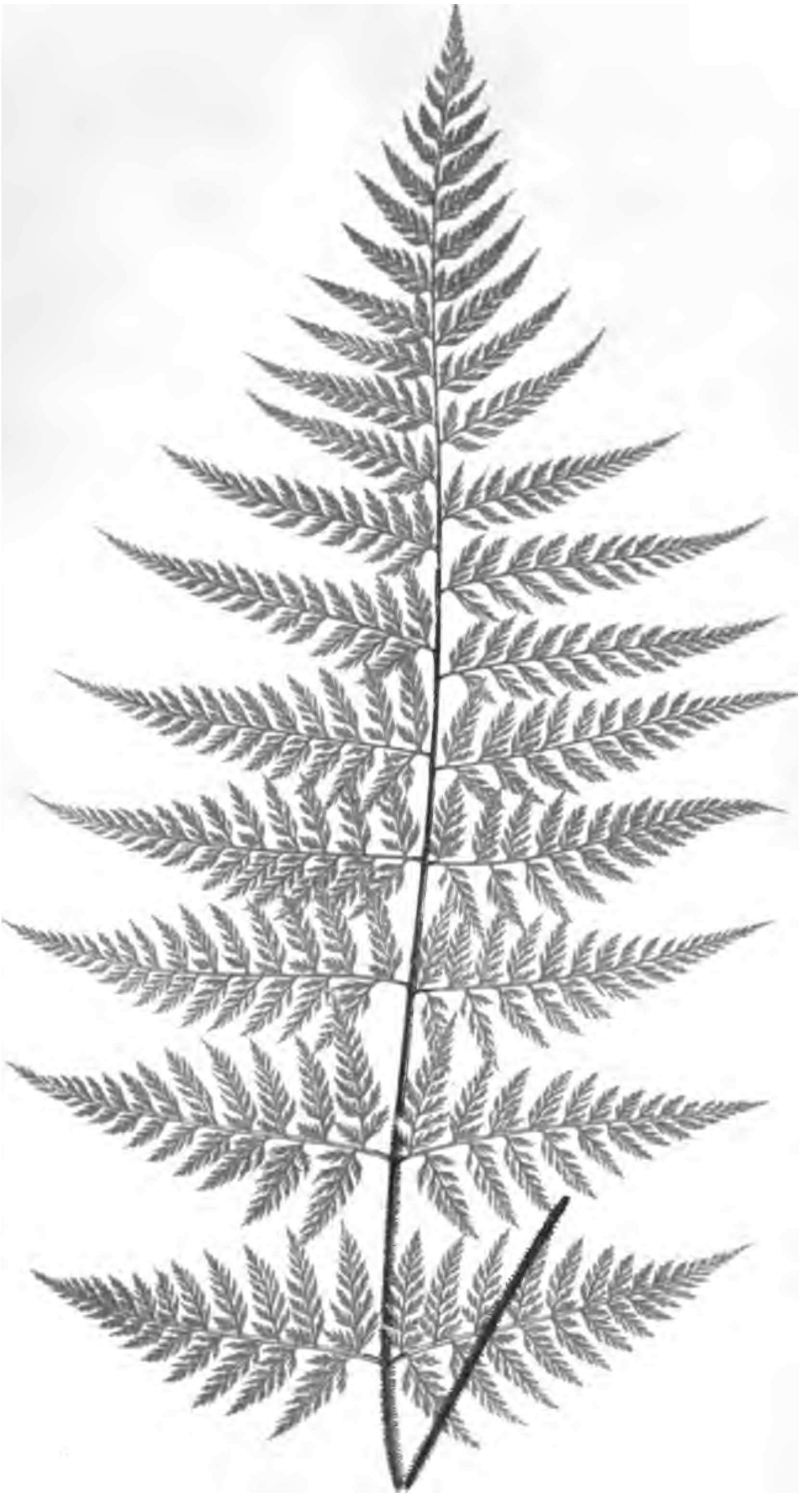
Usual length from twenty-four to thirty-six inches. A plant in my collection has fronds forty-four inches in length, the lower eighteen inches being naked. Rachis and stipes ebeneous, and reddish brown in colour; base slightly hairy.

Sori marginal and continuous.

My thanks are due to Mr. Joseph Henderson, of Wentworth, for a plant of this Fern, and to M. Schott, of the Imperial Gardens, of Schonbrünn, for fronds.

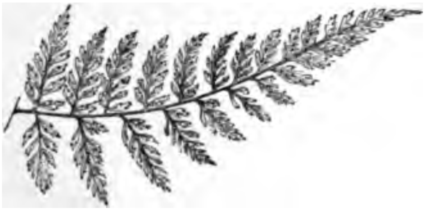
It is in the Catalogues of Messrs. Sim, of Foot's Cray; E. G. Henderson, of St. John's Wood; A. Henderson, of Pine-apple Place; Rollisson, of Tooting; and Stansfield, of Todmorden.

The illustration is from a plant in my own collection.



PTERIS SCABERULA.

X—Vol. 1.



Pinna of mature Frond—upper side.

PTERIS SCABERULA.

RICHARD. HOOKER. LESS.

PLATE X. VOL. IV.

Allosorus scaberulus,	PRESL.
***Pteris*—Brake.**	*Scaberula*—............?

A DWARF pretty Fern, well worthy of cultivation for exhibition.

An evergreen greenhouse species.

Native of New Zealand.

Fronds triangular and semi-quadripinnate, from four to six inches wide; stalks hairy and clustering; rhizoma creeping. Pinnæ elongated, acuminate, opposite below, alternate above, becoming smaller as they approach the apex. Veins forked.

Length of frond from twelve to fifteen inches: colour pale green.

Rare in cultivation.

I am indebted to Mr. Sim, of Foot's Cray, for a frond of this species.

It can be procured of Messrs. Sim, of Foot's Cray, and E. G. Henderson, of St. John's Wood.

The illustration is from a frond sent by Mr. R. Sim.

GENUS VII.

HYPOLEPIS. BERNHARDI.

A SMALL family of tropical Ferns with creeping rhizomas. Of large size. Veins forked and free. Sori marginal, subglobose, and small. Indusium formed of a reflexed changed venule.

Only one species is well known in this country; however Sir W. Hooker, in his "Species Filicum," enumerates the following:—

Hypolepis	tenuifolia.	*Bernhardi.*	New Zealand.
"	Guianensis.	*Klotzsch.*	British Guiana.
"	Dicksonioides.	*Hooker.*	Norfolk Island.
"	amaurorachis.	*Hooker.*	New Holland.
"	setigera.	*Hooker.*	Java.
"	alpina.	*Hooker.*	Java.
"	resinifera.	*Hooker.*	Java.
"	polypodioides.	*Hooker.*	Java.
"	pallida.	*Hooker.*	Java.
"	repens.	*Presl.*	Jamaica.
"	resistens.	*Hooker.*	Neilgherries.
"	parallelogramma.	*Hooker.*	Peru.
"	nigrescens.	*Hooker.*	Jamaica.
"	anthriscifolia.	*Presl.*	Bourbon.
"	elata.	*Presl.*	South Africa.
"	aspera.	*Presl.*	South Africa.
"	Bergiana.	*Hooker.*	South Africa.
"	rugulosa.	*Hooker.*	Otaheite.
"	millefolium.	*Hooker.*	New Zealand.
"	hostilis.	*Presl.*	Peru.
"	Purdieana.	*Hooker.*	New Grenada.
"	distans.	*Hooker.*	New Zealand.
"	Schimperi.	*Hooker.*	Abyssinia.
"	Californica.	*Hooker.*	California.

Hypolepis capensis.	*Hooker.*	Cape of Good Hope.
“ radiata.	*Hooker.*	Tropical America.
“ pedata.	*Hooker.*	Jamaica.
“ spectabilis.	*Link.*	Brazil.
“ paupercula.	*Hooker.*	Cuba.
“ Gardneri.	*Hooker.*	Brazil.

Of the above, only two or three have been introduced into this country as living plants.

Mr. J. Smith, in his "Catalogue of the Ferns cultivated at Kew," mentions two species:—

Hypolepis repens.	*Presl.*
“ tenuifolia.	*Bernhardi.*

Presl, in his "Tentamen Pteridographiæ," enumerates ten species:—

Hypolepis tenuifolia.	*Bernhardi.*
“ repens.	*Presl.*
“ aspera.	*Presl.*
“ Boryana.	*Presl.*
“ Endlicheriana.	*Presl.*
“ anthriscifolia.	*Presl.*
“ Eckloniana.	*Presl.*
“ hostilis.	*Presl.*
“ coniifolia.	*Presl.*
“ parallelogramma.	*Presl.*

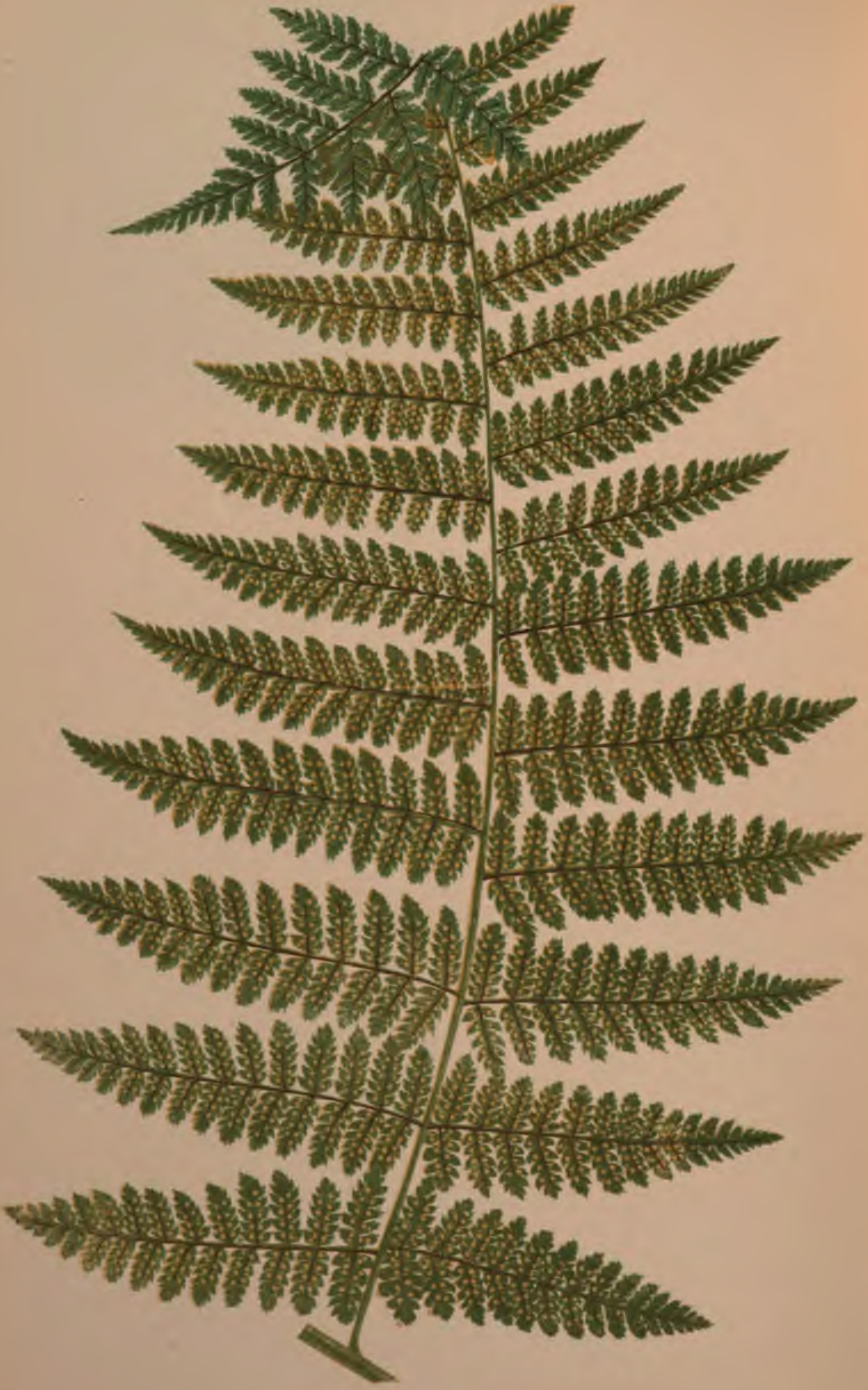
Fee, in his "Genus de la Famille des Polypodiacées," gives the following:—

Hypolepis repens.	*Presl.*
“ Boryana.	*Presl.*
“ anthriscifolia.	*Presl.*
“ trichodes.	*Fee.*
“ Smithii.	*Mong.*
“ tenuifolia.	*Bernhardi.*
“ commutata.	*Hooker.*
“ nigrescens.	*Hooker.*
“ Endlicheriana.	*Presl.*
“ Sellowiana.	*Kaulfuss.*
“ aspera.	*Presl.*

Hypolepis	Schimperi.	*Fee.*
"	Bergiana.	*Fee.*
"	Ecloniana.	*Presl.*
"	hostilis.	*Presl.*
"	parallelogramma.	*Presl.*
"	Helenensis.	*Cuming.*
Adiantopsis	capensis.	*Fee.*
"	chlorophylla.	*Fee.*
"	paupercula.	*Fee.*
"	radiata.	*Fee.*
"	spectabilis.	*Fee.*

In *Hypolepis* there is no British representative.

BIBLIOTHECA BODLEIANA



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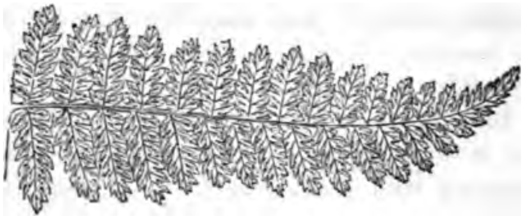
XLVII A.



Pinna of mature Frond—upper side.

HYPOLEPIS REPENS.

PRESL. HOOKER. LINK. FEE. BAUER.
MOORE AND HOULSTON. J. SMITH. SIEBER. PLUMIER.

PLATE XI. VOL. IV.

Lonchitis repens,	LINNÆUS. PLUMIER. RADDI.
“ “	SWARTZ. WILLDENOW.
Cheilanthes repens,	KAULFUSS. KUNZE.
“ *aculeata,*	KAULFUSS. KUNZE.
Dicksonia aculeata,	SPRENGEL.

Hypolepis—From two Greek words, implying *under*, and *a scale*.
Repens—Creeping.

A HANDSOME, robust, coarse-growing Fern, which seeds so freely, that when once obtained it is almost impossible to lose, indeed it becomes a troublesome weed, covering every Fern-pan, to the exclusion of all less robust species.

An evergreen stove Fern.

Native of the West Indies, Martinique, Jamaica, Brazil, Organ Mountains, Galapagos, Columbia, and New Grenada.

Introduced into England in 1825, and into the Royal Gardens, Kew, in the year 1828.

Fronds decompound, three to four times pinnate, with lanceolate-acuminate pinnules, and oblong-linear pinnatifid segments, the lower pair distant; margin crenulate. Pinnæ opposite, and widest at the base; apex acuminate.

Sori circular, terminal, and somewhat hid by the reflexed indusiform marginal crenule; forming a row on either side of the ultimate rib.

Length from thirty-six to sixty inches, of which the lower twenty-four to thirty inches is naked. Colour a yellowish green.

Frond covered with glandulous hairs. Lateral, adherent to a creeping rhizoma.

Rachis and stipes at first green, afterwards becoming brown.

There is a singular variety in cultivation, known as variety *Difformis,* having a peculiar rugose curled appearance. Fronds twenty-four inches in length, and tripinnate; pinnæ irregular; pinnules lacerated.

For a plant of this species my thanks are due to Mr. Lamb, gardener to Mr. F. Wright, of Osmaston Manor; and for fronds to Mr. G. Norman, of Hull.

It may be procured of any Nurseryman.

The illustration is from a plant in my own collection.

GENUS VIII.

CHEILANTHES. Swartz.

A most lovely family of delicate dwarf Ferns, having subglobose marginal small sori, and the margin of the frond reflexed. Tropical for the most part, and inhabitants of dry rocky situations.

Veins forked and free.

Sir W. Hooker describes seventy species in his "Species Filicum," a list of which is here given.

Cheilanthes	micropteris.	*Swartz.*	Brazil.
“	argentea.	*Kunze.*	Siberia.
“	farinosa.	*Kaulfuss.*	East Indies.
“	pulveracea.	*Presl.*	Mexico.
“	rufa.	*Don.*	India.
“	Dalhousiæ.	*Hooker.*	India.
“	pteroides.	*Swartz.*	Cape of Good Hope.
“	squamosa.	*Gillies.*	Argentine Republic.
“	fragrans.	*Webb & Berth.*	Mediterranean.
“	tenuifolia.	*Swartz.*	East Indies.
“	Preissiana.	*Kunze.*	New Zealand.
“	Sieberi.	*Kunze.*	New Holland.
“	microphylla.	*Swartz.*	Jamaica.
“	Tweediana.	*Hooker.*	Brazil.
“	Seemanni.	*Hooker.*	Mexico.
“	Moritziana.	*Kunze.*	Venezuela.
“	elongata.	*Willdenow.*	West Indies.
“	obtusata.	*Presl.*	Peru.
“	crenata.	*Kunze.*	Peru.
“	Wrightii.	*Hooker.*	Texas.
“	subvillosa.	*Hooker.*	India.
“	bulbosa.	*Kunze.*	India.
“	pygmœa.	*Kaulfuss.*	Mexico.
“	varians.	*Hooker.*	India.

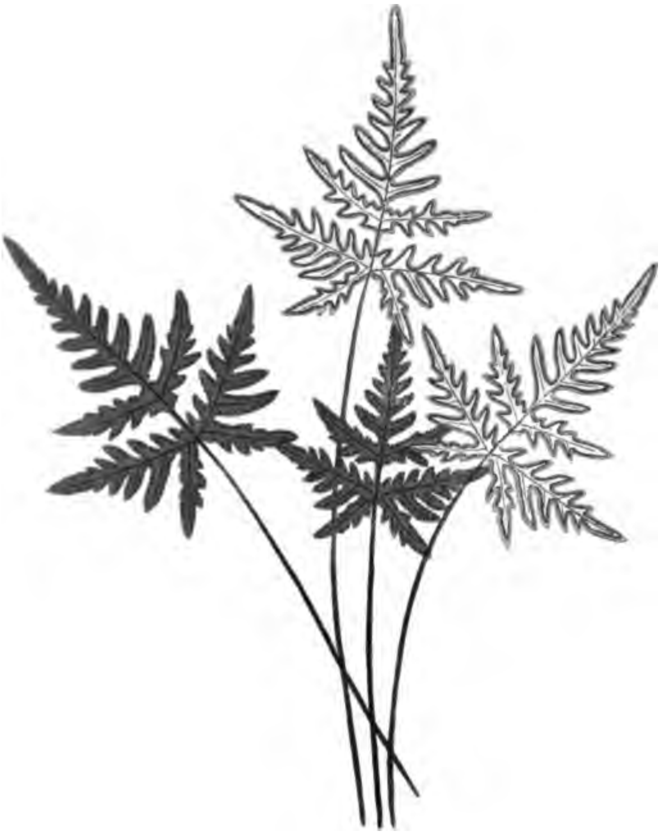
Cheilanthes	Alabamensis.	*Kunze.*	United States.
"	Moluccana.	*Blume.*	Molucca Islands.
"	Kleinhoffii.	*Blume.*	Java.
"	multifida.	*Swartz.*	Cape of Good Hope.
"	triangula.	*Kunze.*	Caffraria.
"	Mathewsii.	*Kunze.*	Peru.
"	hirta.	*Swartz.*	Cape of Good Hope.
"	induta.	*Kunze.*	Sneeuwbergen.
"	pubescens.	*Hooker.*	Mexico.
"	Mac Leanii.	*Hooker.*	Peru.
"	Mysurensis.	*Wallich.*	India.
"	Chusana.	*Hooker.*	Chusan.
"	tenuis.	*Presl.*	Mexico.
"	lendigera.	*Swartz.*	Quito.
"	tomentosa.	*Link.*	Mexico.
"	Bradburii.	*Hooker.*	United States.
"	Szovitzii.	*Fisch. & Mey.*	India.
"	vestita.	*Swartz.*	North America.
"	scariosa.	*Presl.*	Peru.
"	myriophylla.	*Desvaux.*	South America.
"	Lindheimeri.	*Hooker.*	Texas.
"	elegans.	*Desvaux.*	Chili.
"	Fendleri.	*Hooker.*	New Mexico.
"	speciosissima.	*Braun.*	Mexico.
"	dichotoma.	*Hooker.*	Brazil.
"	flexuosa.	*Kunze.*	Brazil.
"	viscosa.	*Link.*	Mexico.
"	leucopoda.	*Link.*	Mexico.
"	marginata.	*Hooker.*	Quito.
"	deltoidea.	*Kunze.*	Cape of Good Hope.
"	Atherstonii.	*Hooker.*	South Africa.
"	cuneata.	*Link.*	Mexico.
"	profusa.	*Kunze.*	Namaqua Land.
"	cornuta.	*Kunze.*	Cape of Good Hope.
"	pulchella.	*Bory.*	Teneriffe.
"	coriacea.	*Decaisne.*	Arabia Felix.
"	viridis.	*Swartz.*	Arabia Felix.
"	hirsuta.	*Link.*	Mexico.
"	canescens.	*Kunze.*	Mexico.
"	aspera.	*Hooker.*	Western Texas.

Cheilanthes	**caudata.**	***Presl.***	New Holland.
“	**intramarginalis.**	*Hooker.*	Mexico.
“	**nitidula.**	*Hooker.*	India.
“	**chrysophylla.**	*Hooker.*	Khasya.
“	**ochracea.**	*Hooker.*	Mexico.
“	**andina.**	*Hooker.*	Peru.

Mr. J. Smith, in his “Catalogue of the Ferns cultivated at Kew,” gives the following:—

Myriopteris	lendigera.	*Fee.*
“	myriophylla.	*J. Smith.*
“	elegans.	*J. Smith.*
“	tomentosa.	*Fee.*
“	frigida.	*J. Smith.*
“	vestita.	*J. Smith.*
Cheilanthes	micropteris.	*Swartz.*
“	viscosa.	*Link.*
“	fragrans.	*Hooker.*
“	tenuifolia.	*Swartz.*
“	microphylla.	*Swartz.*
“	Alabamensis.	*Kunze.*
“	spectabilis.	*Kaulfuss.*
“	radiata.	*J. Smith.*
“	argentea.	*Kunze.*
“	farinosa.	*Kaulfuss.*

We have no British representative.



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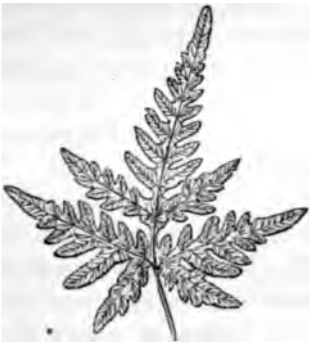


Mature Frond—upper side.

CHEILANTHES ARGENTEA.

KUNZE. J. SMITH. HOOKER.

PLATE XII. VOL. IV.

Aleuritopteris argentea,	FEE.
Pteris argentea.	GMELIN. SWARTZ. LINK.
" "	LANGSDORFF AND FISCHER. (*Not of* BORY.)
Allosorus argenteus,	PRESL.
Cassebeera argentea,	J. SMITH.
Pteris pedata var. *Sibirica,*	LINNÆUS.

Cheilanthes—From two Greek words, signifying *a lip,* and *a flower,* in reference to the form of the seed organs. *Argentea*—Silvery.

A CHARMING, dwarf, evergreen Fern, of a rich dark green colour above, whilst beneath it is copiously covered with a white farinose powder.

An evergreen greenhouse species.

Native of Siberia—in the fissures of rocks on the river Katunja—Altai, Kamtschatka, Dahuria, and Lake Baikal.

Introduced into England in the year 1823.

The frond triangular in form, glabrous, cordately five-angled, and tripartite; the three primary divisions pinnatifid, their base bipinnatifid; pinnæ opposite, the basal pair auriculate below. The frond somewhat concave; margin of frond crenate.

Rachis and stipes ebeneous, of a reddish colour, slightly hairy near the base, and destitute of farinose powder. Rhizoma short, thick, and creeping.

Veins forked.

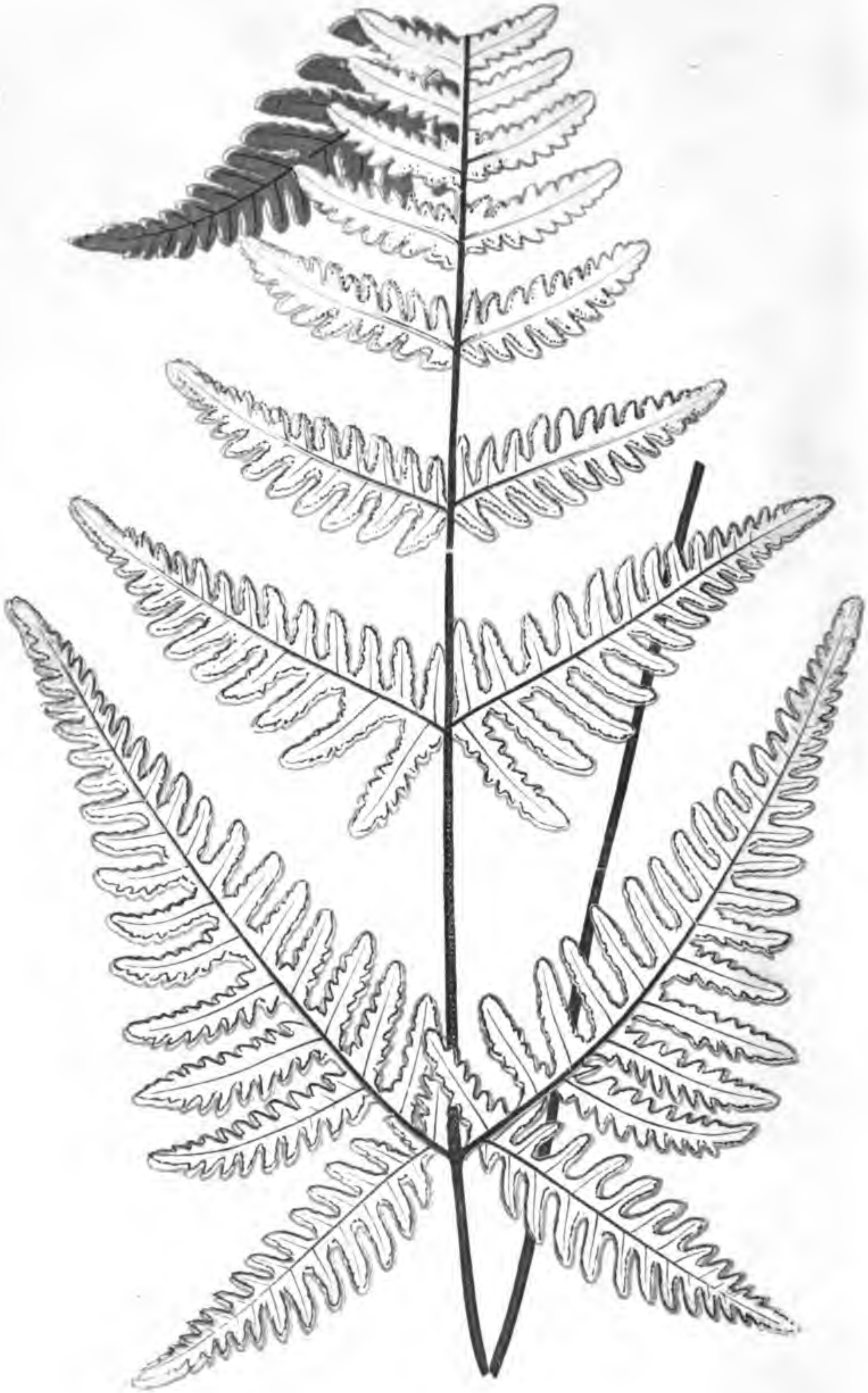
Sori everywhere continuous; indusium very broad, transversely waved, and crenated. Seed-vessels black and copious, giving the frond the appearance of a marginal black belt.

Length of frond four inches, of which the lower two inches and a quarter is naked.

This species I raised from spores gathered in Siberia.

It may be procured of Messrs. Veitch, of Chelsea; Cooling, of Derby; and Booth, of Hamburg.

The illustration is from a plant in my own collection.



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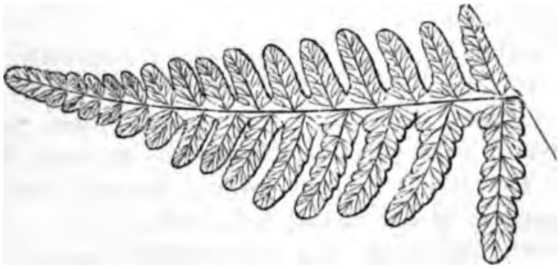


Pinna of mature Frond—upper side.

CHEILANTHES FARINOSA.

Kaulfuss. Hooker and Greville. J. Smith.

PLATE XIII. VOL. IV.

Pteris decursiva,	Forskal. Swartz.
" *farinosa,*	Forskal. Vahl. Swartz.
" *argyrophylla,*	Swartz.
" *argentea,*	Bory, (*not of* Gmelin, Swartz, Hooker, *or* Langsdorff & Fischer.)
Cheilanthes dealbata,	Don. Kunze. Wallich.
" "	Schimper.
" *rigidula,*	Wallich.
Allosorus dealbatus,	Presl.
Cassebeera farinosa,	J. Smith. Moore and Houlston.
Aleuritopteris dealbata,	Fee.

Cheilanthes—From the Greek; *a lip*, and *a flower*. *Farinosa*—Mealy or farinose.

This magnificent species is somewhat difficult to grow successfully, requiring great care in potting, and constant attention afterwards, yet fully repaying any additional labour bestowed upon it.

An evergreen stove Fern.

Native of Mexico, India, Arabia, Abyssinia, Bourbon, Ceylon, Philippine Islands, and Java.

Introduced into the Royal Gardens, Kew, in 1840, by the late Mr. Riley.

Fronds glabrous; triangular, or more frequently elongate-triangular in form; bipinnatifid, with oblong-obtuse segments. Rachis and stipes ebeneous, a few reddish brown long scales near the base; terminal, and adherent to an erect fasciculate rhizoma. The frond densely covered beneath with a white farinose powder; colour above, dull green.

Sori linear, continuous, and eventually becoming confluent. Indusium extending throughout every segment of the frond.

Length of frond from twelve to twenty-four inches, of which the lower half is naked.

Rachis and stipes densely covered with a white farinose powder.

Basal pinnæ eared below.

There are two varieties of this species:—

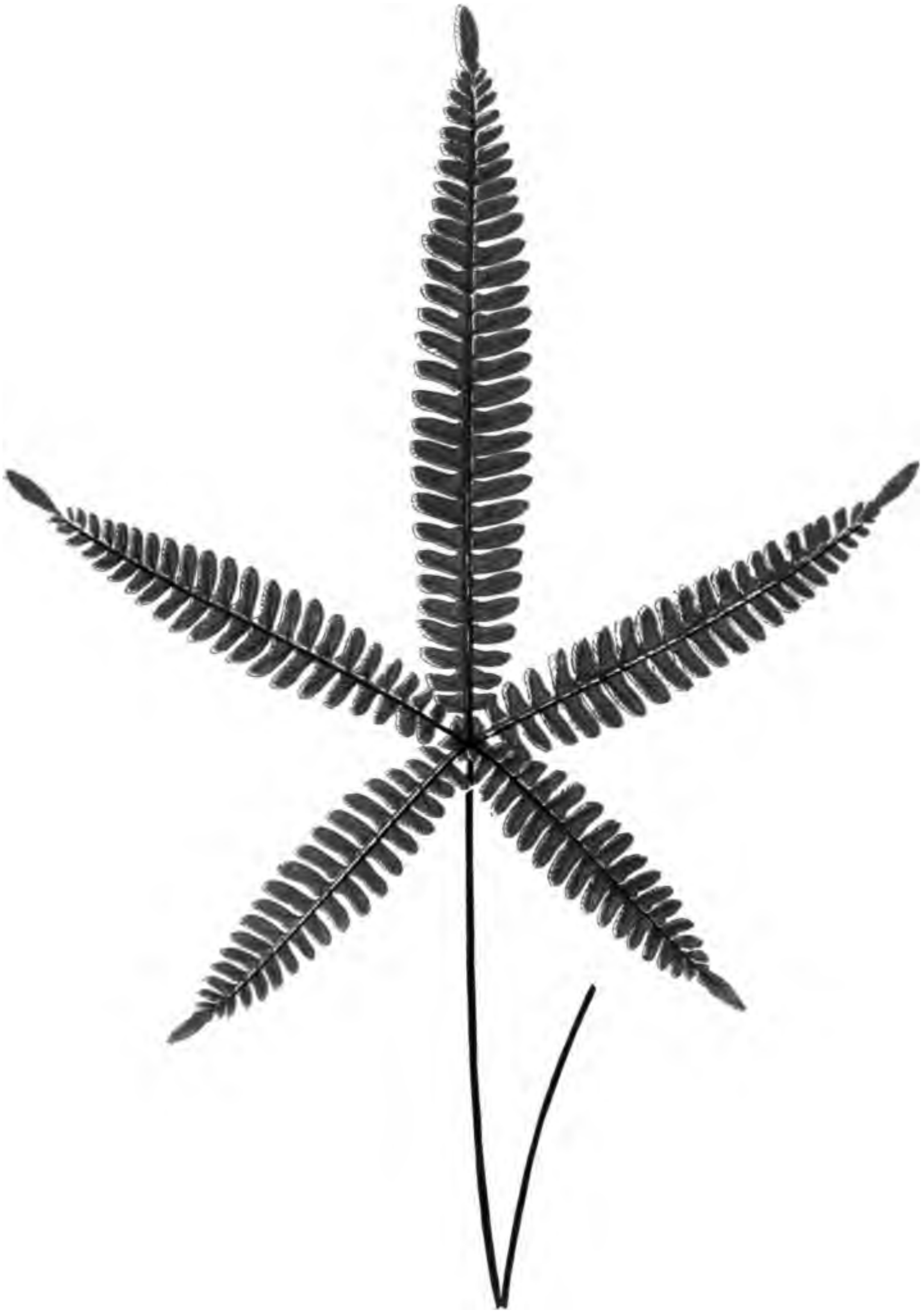
Var. 1, almost destitute of powder. Found at Oaxaca, Mexico, by M. Galleotti.

Var. 2, small, compact, and rigid. Found at Madras, by Dr. Wight. This is the *Cheilanthes rigidula* of Wallich.

For plants my thanks are due to Mr. Joseph Henderson, of Wentworth, and Mr. E. Cooling, of Derby; and for fronds to Mr. Joseph Henderson; Mr. Jeans, of Grantham; Sir William Hooker, of the Royal Gardens, Kew; and Mr. G. Norman, of Hull.

It may be procured of Messrs. E. G. Henderson, of St. John's Wood; Kennedy, of Covent Garden; Veitch, of Chelsea; Rollisson, of Tooting; A. Henderson, of Pine-apple Place; Sim, of Foot's Cray; Booth, of Hamburg; Stansfield, of Todmorden; and Cooling, of Derby.

The illustration is from a plant in my own collection.



CHEILANTHES RADIATA.

XIV.—VOL. I.

Pinna of mature Frond - under side.

CHEILANTHES RADIATA.

J. Smith. Moore and Houlston.

PLATE XIV. VOL. IV.

Adiantum radiatum,	Linnæus. Swartz. Plumier.
“ “	Kunze. Kaulfuss. Presl.
“ “	Leibmann. Willdenow.
“ “	Plukenet. Sloan.
“ “	Schlechtendal.
“ “	Martens and Galleotti.
Hypolepis radiata,	Hooker.
Adiantopsis radiata,	Fee.
Actiniopteris radiata,	J. Smith.

Cheilanthes—From the Greek; *a lip,* and *a flower.* *Radiata*—Rayed.

A lovely dwarf Fern, but little known in cultivation. Until recently this species was considered an *Adiantum.*

An evergreen stove species.

Native of Tropical America, Mexico, West Indies, Jamaica, St. Domingo, Martinica, Caraccas, and Brazil. In Mexico this species is found from the east coast to an elevation of four thousand five hundred feet, growing in shady places in woods. Schiede found it at Hacienda de la Lagune; Gallcotti found it at Jalapa and Mirador; Leibmann met with it at Mirador, and

Ranchoen Cabrestros at Rio Nautla, in the Department of Vera Cruz, Columbia, and Peru.

Cultivated in the Royal Gardens, Kew, in 1827.

The fronds are pinnate, digitate, and glabrous; branches linear and radiating. Segments oblong-obtuse, approximate, numerous, petiolate, sub-imbricate, articulated at the base, auriculate, and having a crenate margin.

Rachis and stipes ebeneous; terminal, and adherent to a fasciculate erect rhizoma.

Length twelve inches.

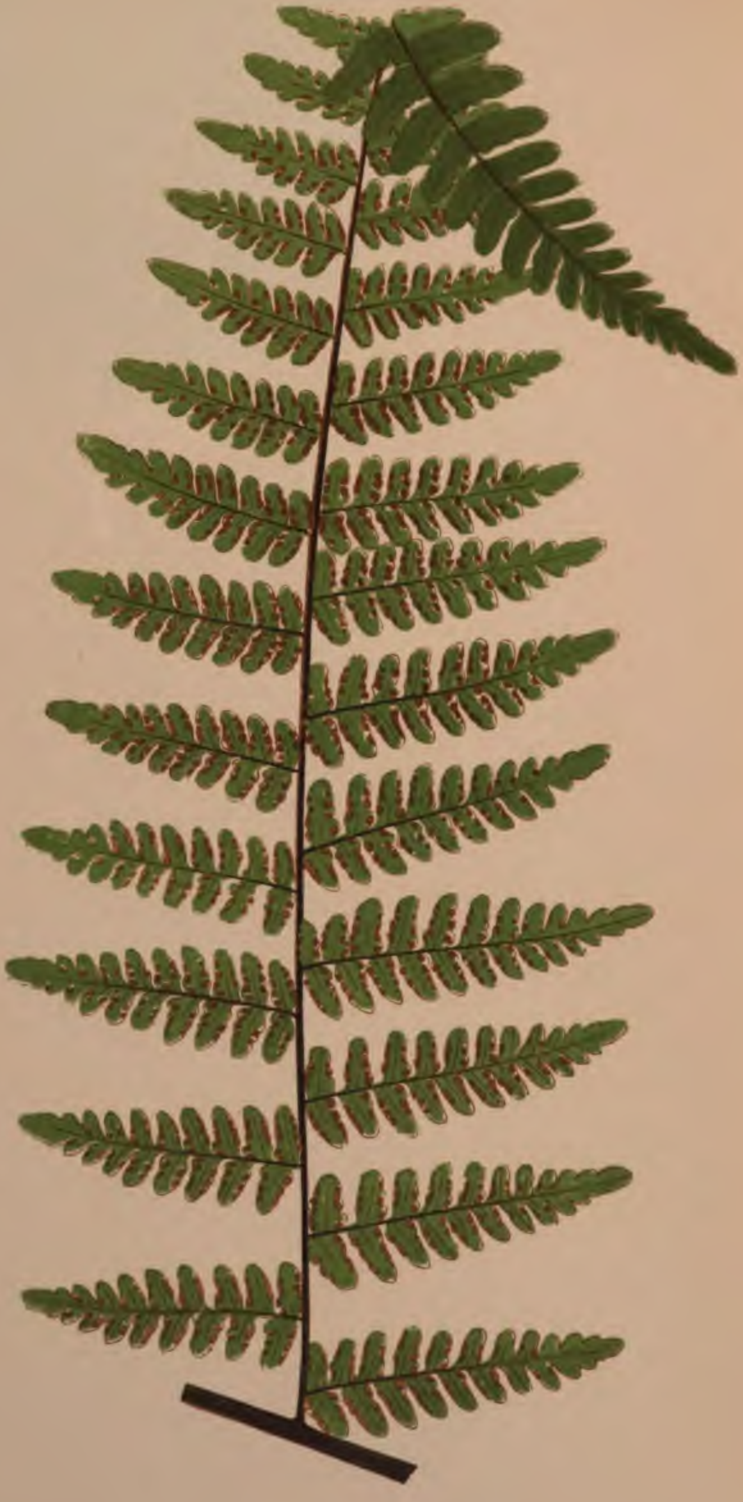
Sori conspicuous, and often crowded. Indusium reniform.

Veins forked; venules direct; apices free and sporangiferous.

For fronds my thanks are due to Mr. R. Sim, of Foot's Cray.

This species may be procured of Messrs. Sim, of Foot's Cray; E. G. Henderson, of St. John's Wood; and Kennedy, of Covent Garden.

The illustration is from Mr. Sim's frond.



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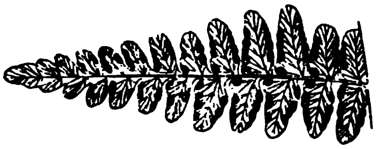


Portion of mature Frond—under side.

CHEILANTHES SPECTABILIS.

KAULFUSS. J. SMITH. MOORE AND HOULSTON.

PLATE XV. VOL. IV.

Cheilanthes Brasiliensis,	RADDI.
" *chlorophylla,*	SWARTZ. KUNZE.
Hypolepis spectabilis,	PRESL. HOOKER. LINK.
" *coniifolia,*	PRESL.
Adiantopsis spectabilis,	FEE.
Aspidium coniifolium,	PRESL.

Cheilanthes—From the Greek; *a lip,* and *a flower.* *Spectabilis*—Showy.

A SLENDER, tall, upright, straggling-growing Fern, of easy cultivation.

An evergreen stove species.

Native of Brazil, Organ Mountains, Rio Pernambuco, and Rio Grande.

Introduced into England in 1829, and received from the Royal Berlin Gardens into the Royal Gardens, Kew, in 1841.

Fronds glabrous, tripinnate, with linear-acuminate pinnæ, oblong-linear pinnules, and oblong-obtuse segments; somewhat crenate, adnate, and decurrent. Fronds terminal, and adherent to an erect fasciculate rhizoma.

Pinnæ sub-opposite below, alternate above; remote below, approximate above, and crowded near the apex.

Stipes and rachis ebeneous, and hairy near the base.

Length of frond sixty inches, of which the lower half is naked.

Easily raised from spores.

My thanks are due to Messrs. Veitch, Jun., for a plant of this species; and to Mr. Joseph Henderson, of Wentworth; Mr. J. Smith, Curator of the Royal Botanic Gardens, Kew; and Mr. G. Norman, of Hull, for fronds.

It may be procured of Messrs. E. G. Henderson, of St. John's Wood; Veitch, of Chelsea; Sim, of Foot's Cray; Rollisson, of Tooting; and Stansfield, of Todmorden.

The illustration is from a pinna of a plant in my own collection.

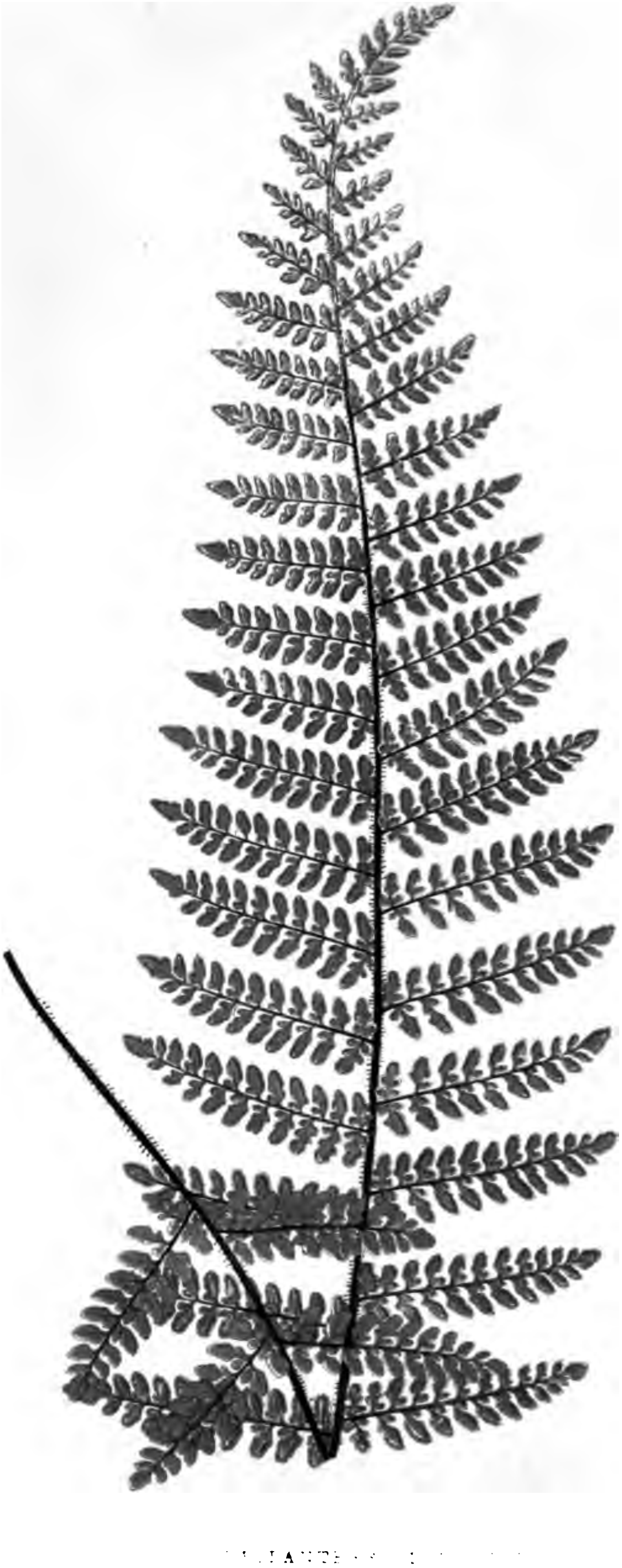


PLATE [illegible]

XVI [illegible]

Pinna of mature Frond—upper side.

CHEILANTHES MICROMERA.

Link. Moore and Houlston. Hooker. Sloan.
Plumier. Schott.

PLATE XVI. VOL. IV.

Lonchitis minima,	Plumier.
Cheilanthes microphylla,	Swartz. Hooker. Willdenow.
" "	J. Smith. Kunze. Presl. Fee. (*Not of* Link *or* Kaulfuss.)
" *pubescens,*	Schlechtendal.
Cassebeera microphylla,	J. Smith.
Adiantum microphyllum,	Swartz.
" *nigrum,*	Sloan.

Cheilanthes—From the Greek; *a lip,* and *a flower.* *Micromera*—.........?

A pretty, well-known, dwarf species, easily cultivated.

An evergreen greenhouse Fern.

Native of Tropical America, Columbia, Venezuela, Brazil, West Indian Islands, Jamaica, Cuba, Mexico, and Peru.

This species must not be confused with others. For the guidance of those who do not know the species, it is requisite to state that *C. macrophylla, C. microphylla, C. micropteris,* and *C. micromera,* are all different species.

C. micromera of Link, is *C. microphylla* of Swartz and Kunze. *C. microphylla* of Kaulfuss, is *C. Moritziana* of Kunze. *C. macrophylla,* Kunze. *C. micropteris,* Swartz.

Introduced into the Royal Gardens, Kew, in the year 1844, having been received from Mr. Henderson, and being previously introduced into England in 1822.

Fronds lanceolate-acuminate and bipinnate; pinnæ linear-acuminate and alternate; the segments obovate, and in the sterile ones crenate; fertile segments concave. Stipes, rachis, and midrib of pinnæ ebeneous, and clothed with small brown scales.

Sori continuous and confluent; indusium small.

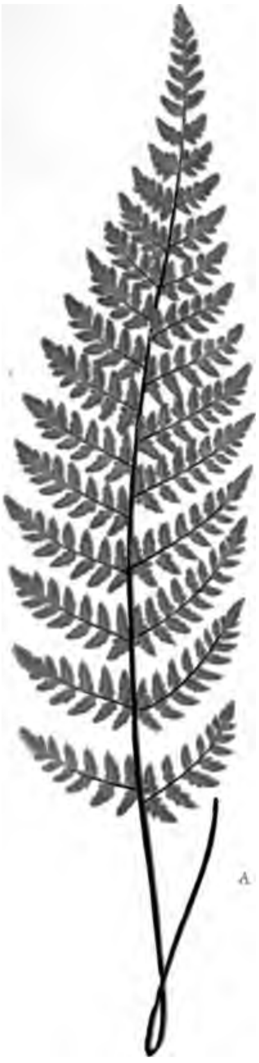
Terminal, adherent to a short creeping rhizoma.

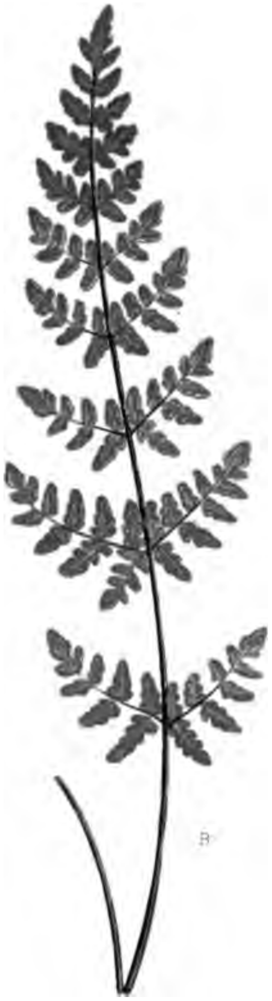
Length of frond from ten to eighteen inches; colour deep green.

My thanks are due to Mr. Joseph Henderson, of Wentworth, for a plant and fronds of this species; and to M. Schott, of the Royal Botanic Gardens of Schonbrünn, and Mr. G. Norman, of Hull, for fronds.

It may be procured of Messrs. E. G. Henderson, of St. John's Wood; Veitch, of Chelsea; Rollisson, of Tooting; Sim, of Foot's Cray; A. Henderson, of Pine-apple Place; Booth, of Hamburg; Stansfield, of Todmorden; Kennedy, of Covent Garden; and Cooling, of Derby.

The illustration is from a plant in my own collection.





CHEILANTHES ALABAMENSIS. C. FRAGRANS.

XVII—Vol. 4.

Portion of mature Frond—under side.

CHEILANTHES ALABAMENSIS.

Kunze. Hooker. J. Smith. Fee.

PLATE XVII.—A. VOL. IV.

Pteris Alabamensis,	Buckley.
" *gracilis,*	Rugel. Michaux. Swartz.
" "	Pursh. Nuttall.
Allosorus gracilis,	Presl.

Cheilanthes—From the Greek; *a lip,* and *a flower.*
Alabamensis—Named from Alabama, where found growing.

An interesting dwarf Fern, but little known in cultivation in this country.

A greenhouse species.

Native of Canada, Southern United States, growing on limestone rocks, on the banks of the Tenessee River, Alabama.

Fronds glabrous, sub-coriaceous, lanceolate, and acuminate; below, bipinnate; above, pinnated-pinnatifid. Primary pinnæ approximate.

Sori continuous all round the lobes and pinnules.

Caudex creeping, brown in colour, with brown woolly scales.

Stipes, rachis, and main secondary rachis glossy black, and hirsute.

Length of frond from three to five inches.

For a plant and fronds of this species I am indebted to Mr. Joseph Henderson, of Wentworth, and to M. Schott, of the Imperial Gardens of Schonbrünn.

This species may be procured of Messrs. Veitch, of Chelsea; E. Henderson, of St. John's Wood; Booth, of Hamburg; and Sim, of Foot's Cray.

The illustration is from a frond sent by Mr. Joseph Henderson, of Wentworth.

Portion of mature Frond—under side.

CHEILANTHES FRAGRANS.

Webb and Berthelot. Hooker. (*Not of* Swartz.)
Kunze. J. Smith.

PLATE XVII.—B. VOL. IV.

Polypodium fragrans,	Linnæus. Desfontains.
Pteris acrosticha,	Balbis.
" *fragrans,*	Lag.
Adiantum fragrans,	Viviani.
Cheilanthes odora,	Swartz. Schkuhr. Link.
" "	Moore and Houlston.
" "	Presl. Fee.
" *suaveolens,*	Swartz. Schkuhr. Sibthorp.
" *Maderensis,*	Lowe.

Cheilanthes—From the Greek; *a lip,* and *a flower.* *Fragrans*—Fragrant.

An interesting dwarf species.

An evergreen greenhouse Fern.

Native of the south of Europe, Madeira, the whole of the Mediterranean Islands, and Affghanistan.

Introduced into the Royal Gardens, Kew, in 1778.

Fronds glabrous, ovate-lanceolate, and bipinnate; the pinnæ oblong-obtuse; the basal ones remote and pinnatifid.

Rachis and stipes having narrow scales.

Sori confluent.

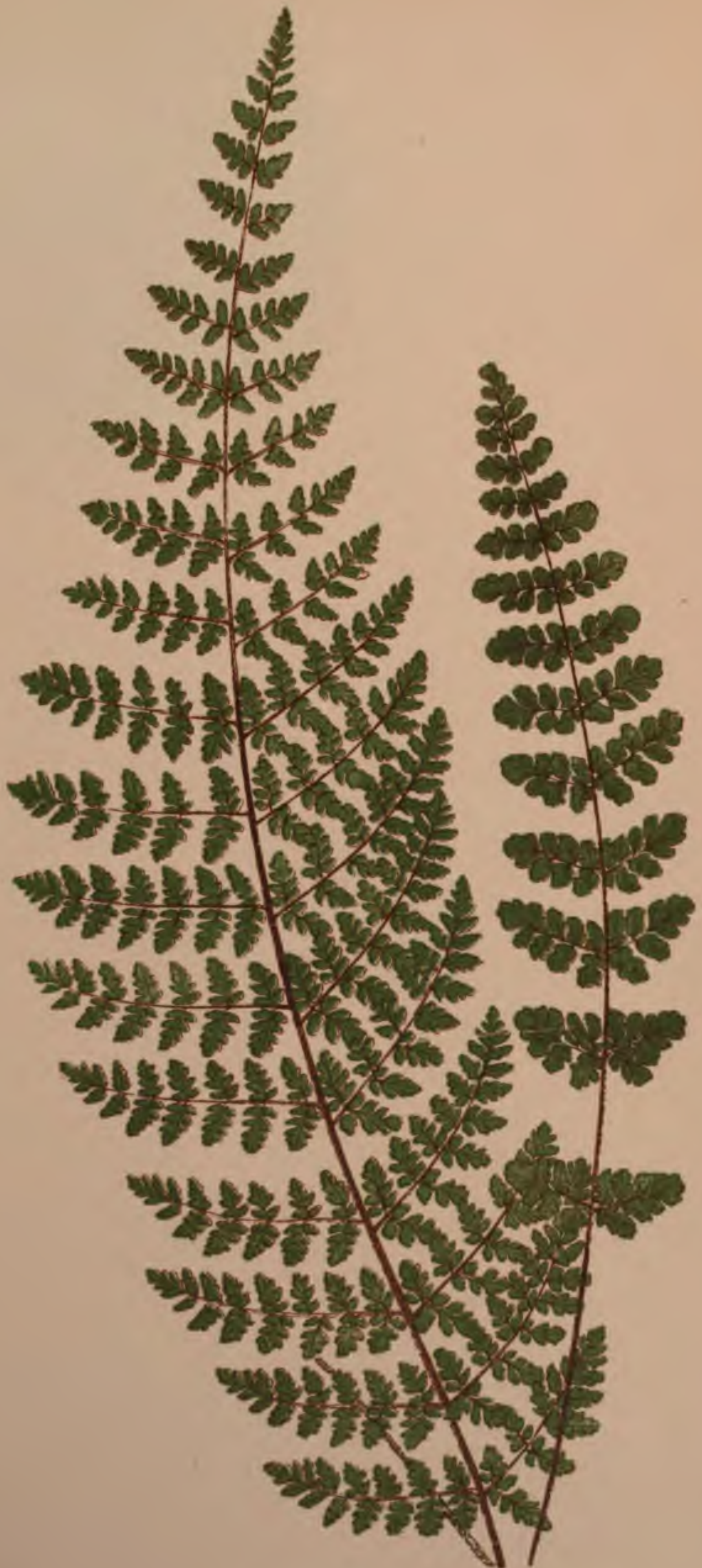
Fronds terminal, and adherent to a somewhat tufted rhizoma.

Length usually six inches; colour light green.

For a plant I am indebted to Mr. Joseph Henderson, of Wentworth.

It can be procured of Messrs. Sim, of Foot's Cray, and Kennedy, of Covent Garden.

The illustration is from a plant in my own collection.



CHEILANTHES HIRTA.

XVIII—Vol. 4.

Pinna of mature Frond—under side.

CHEILANTHES HIRTA.

SWARTZ. HOOKER. WILLDENOW. KUNZE.
MOORE AND HOULSTON. LINK. PRESL. FEE.

PLATE XVIII. VOL. IV.

Adiantum Caffrorum, SWARTZ. BLUME. KUNZE.

Cheilanthes—From the Greek; *a lip*, and *a flower*. *Hirta*—Hairy.

AN exceedingly handsome delicate Fern.

An evergreen greenhouse species.

Native of Mexico, Cape of Good Hope, Port Natal, Graham's Town, and Java Mountains.

Introduced into this country in 1816.

Fronds linear-lanceolate, sub-tripinnate, and densely covered with glandulose hairs. The pinnules pinnatifid, oblong-obtuse, and small in size; the segments crenate.

Sori copious, and more or less confluent.

Rachis and stipes reddish brown; rhizoma somewhat erect.

Sori distinct, situated on each segment of the fertile frond, and eventually becoming confluent; colour reddish.

Length of frond from six to sixteen inches; colour pale green.

Kunze describes four varieties, namely:—

Cheilanthes olivacea, Fee. (*C. hirta*, var., Kunze.)

C. parvibola, Fee. (*C. hirta* var. *parviloba*, Kunze.)

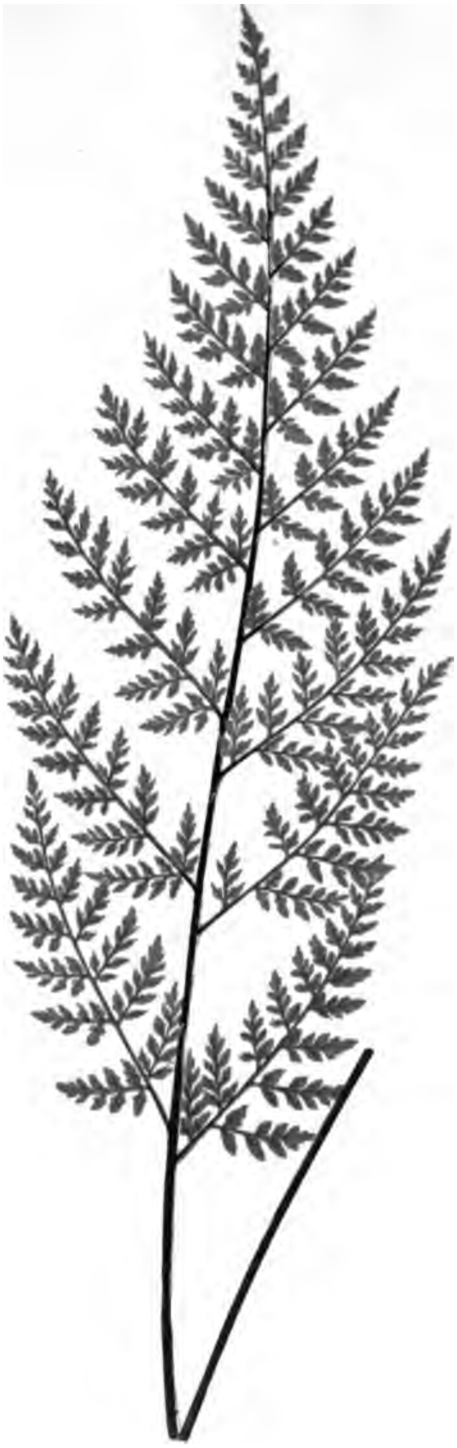
Myriopteris contracta, Fee. (*C. hirta* var. *contracta,* Kunze.)

M. intermedia, Fee. (*C. hirta* var. *intermedia,* Kunze.)

For a plant and fronds I am indebted to Messrs. Veitch, of Chelsea, and for other fronds to Mr. Joseph Henderson, of Wentworth.

It is in the Catalogues of Messrs. Veitch, of Chelsea; Sim, of Foot's Cray; E. G. Henderson, of St. John's Wood; and Booth, of Hamburg.

The illustration is from a frond forwarded by Mr. Joseph Henderson, of Wentworth.



CHEILANTHES TENUIFOLIA.

XIX—Vol. I.

Pinna of mature Frond—under side.

CHEILANTHES TENUIFOLIA.

SWARTZ. HOOKER. R. BROWN. SCHKUHR.
WILLDENOW. SMITH. KAULFUSS. KUNZE. PRESL. FEE.
(*Not of* SIEBER *or* LINK.)

PLATE XIX. VOL. IV.

Cheilanthes rupestris,	WALLICH.
" *micrantha,*	WALLICH.
Aspidium tenue,	RETZIUS.
Pteris humilis,	FORSTER.
" *nigra,*	RETZIUS.
Trichomanes tenuifolia,	BURMANN.
Dryopteris campestris,	RUMPH.
Adiantum cicutæfolium,	ENC. BOT.
Acrostichum tenue,	RETZIUS.

Cheilanthes—From the Greek; *a lip,* and *a flower.*
Tenuifolia—Slender-leaved.

A PRETTY tender species, not commonly seen in collections.

A deciduous greenhouse Fern.

Introduced into the Royal Gardens, Kew, in 1824.

Native of New Holland, East Indies, Ceylon, Java, Malacca, Assam, Penang, Philippine Islands, China, and New Zealand.

Fronds more or less ovate and tripinnate; pinnules linear-acuminate; segments oblong-ovate and deflexed. Fronds submembranaceous and glabrous.

Rachis, stipes, and the midrib of pinnæ brownish, and having narrow scales.

Sori circular, eventually confluent; indusium minute.

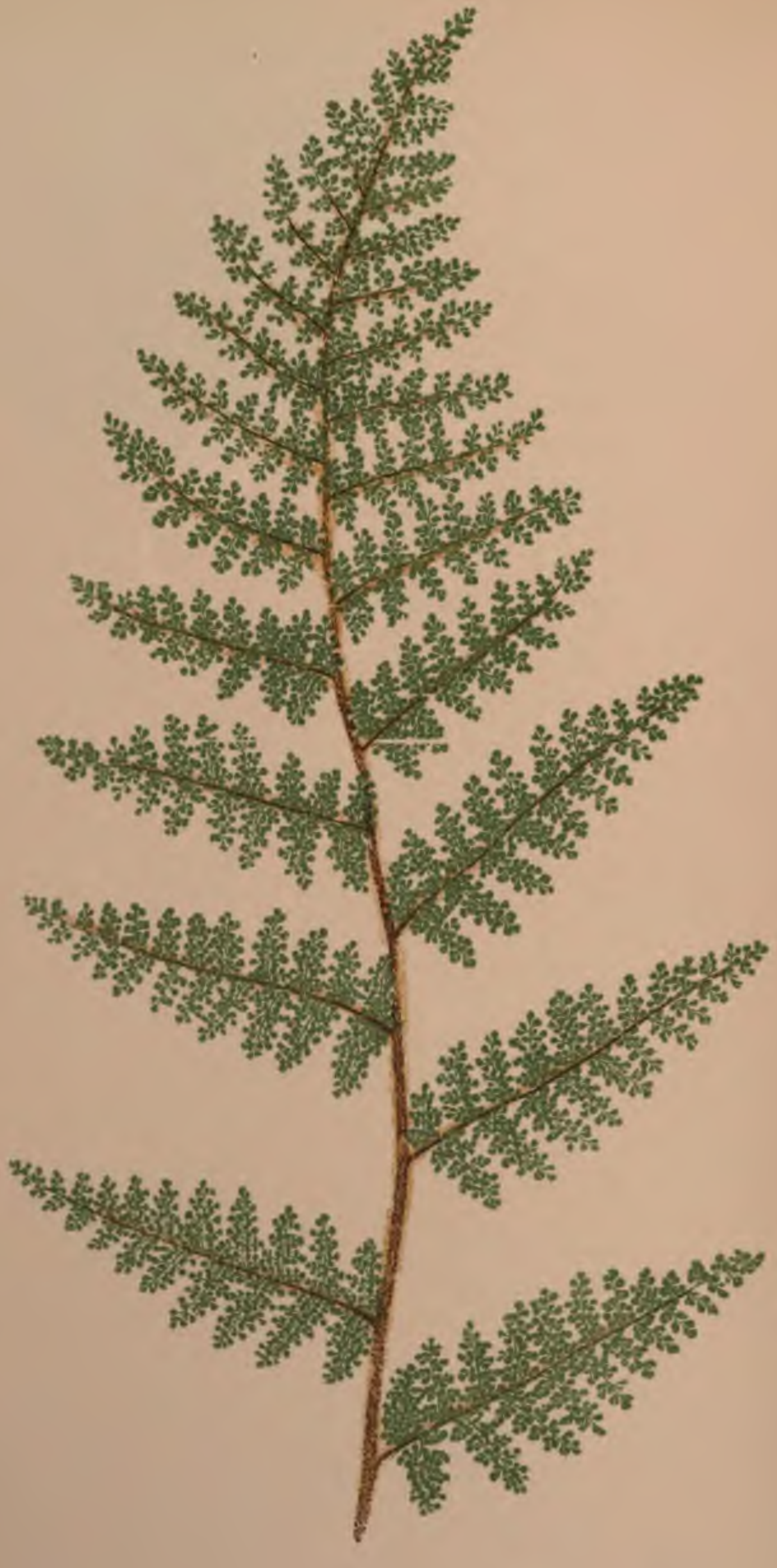
Fronds terminal, and adherent to a creeping rhizoma.

Length of frond twelve inches; colour light green.

For a plant I am indebted to Mr. R. Sim, of Foot's Cray; and for fronds to Mr. Joseph Henderson, of Wentworth, and M. Schott, of the Imperial Gardens of Vienna.

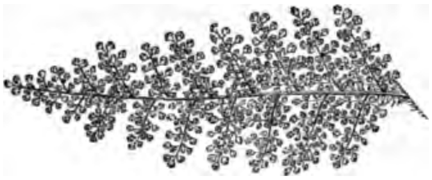
It may be procured of Messrs. Veitch, of Chelsea; E. G. Henderson, of St. John's Wood; Sim, of Foot's Cray; and Kennedy, of Covent Garden.

The illustration is from a frond forwarded by Mr. Joseph Henderson.



CHEILANTHES ELEGANS.—PORTION OF FROND.

XX—Vol. 4.



Pinna of mature Frond—under side.

CHEILANTHES ELEGANS.

DESVAUX. HOOKER. KUNZE.

PLATE XX. VOL. IV.

Cheilanthes lendigera,	MARTENS AND GALLEOTTI.
" "	MORITZ.
" *paleacea,*	MARTENS AND GALLEOTTI.
Myriopteris elegans,	J. SMITH.
" *Marsupianthus,*	FEE.
" *paleacea,*	FEE.

Cheilanthes—From the Greek; *a lip,* and *a flower.* *Elegans*—Elegant.

AN exceedingly beautiful and delicate-looking species, known in cultivation in this country under the name of *Cheilanthes lendigera.*

An evergreen stove species.

Native of Chili, Columbia, Peru, Caraccas, and Mexico. In the latter country it is found at an elevation of from six thousand five hundred to eight thousand feet.

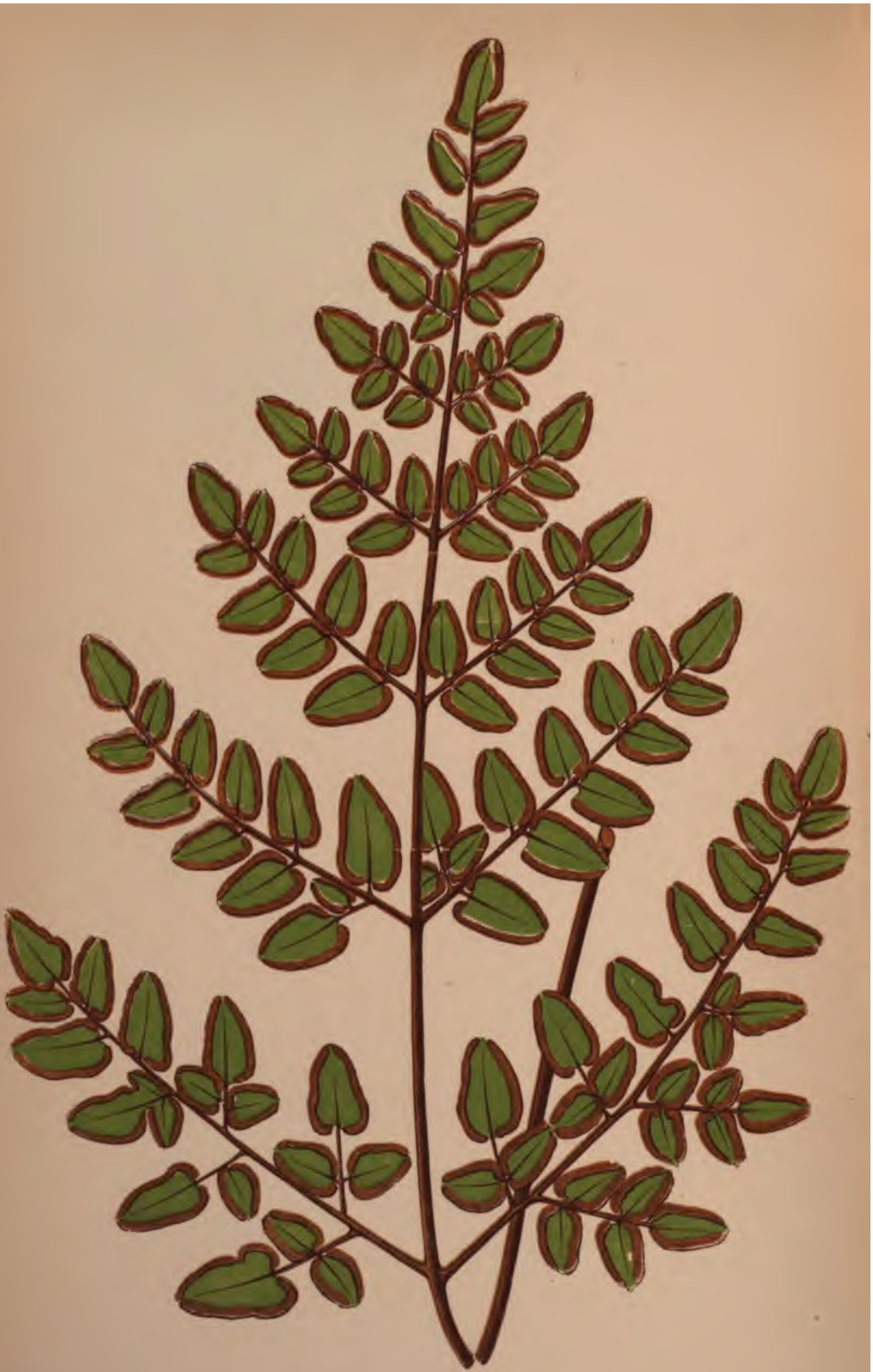
Fronds ovate-lanceolate, tripinnate, and acuminate; pinnules minute, glabrous above, hirsute beneath, and obovate-globose. Stipes and rachis hirsute, with brown hairs. Caudex covered with dark brown scales, and tufted.

Length of frond from twelve to twenty-four inches.

For plants I am indebted to Messrs. A. Henderson, of Pine-apple Place; Mr. Stratton, of the Cambridge Botanic Gardens; and to Miss Carr, of Qualt Rectory, near Bridgnorth.

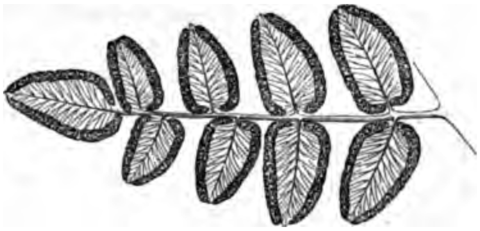
It may be procured of Messrs. Veitch, of Chelsea; Rollisson, of Tooting; E. G. Henderson, of St. John's Wood; Sim, of Foot's Cray; Booth, of Hamburg; Stansfield, of Todmorden; and Cooling, of Derby.

The illustration is from a plant in my own collection.



CHEILANTHES PTEROIDES.

XXI – Vol. 4.



Pinna of mature Frond—under side.

CHEILANTHES PTEROIDES.

SWARTZ. HOOKER. WILLDENOW. BLUME. KUNZE.

PLATE XXI. VOL. IV.

Adiantum pteroides,	LINNÆUS. THUNBERG.
Cassebeera "	PRESL. J. SMITH.
Pteris orbiculata,	HOUTTUYN.

Cheilanthes—From the Greek; *a lip,* and *a flower.* *Pteroides*—Pteris-like.

A RARE handsome species.

An evergreen greenhouse Fern.

Native of the Island of Java, where it is found at the summit of Mount Gede, and also of the Cape of Good Hope, at an elevation of from one to three thousand feet.

Introduced into the Royal Gardens, Kew, in 1775.

This species is so different in many respects to the genus *Cheilanthes,* that it has been called an *Adiantum* by Linnæus, a *Cassebeera* by Presl, and a *Pteris* by Houttuyn. However, having the true involucres of a *Cheilanthes,* Sir William Hooker has very properly placed it in that genus.

Fronds glabrous, large, and tripinnate; the pinnæ remote; pinnules remote, petiolulate, frequently an inch long, cordate, elliptical, crenate, and stout; caudex thick, scaly, and creeping. Stipes and rachis thick, ebeneous, shining, and slightly scaly.

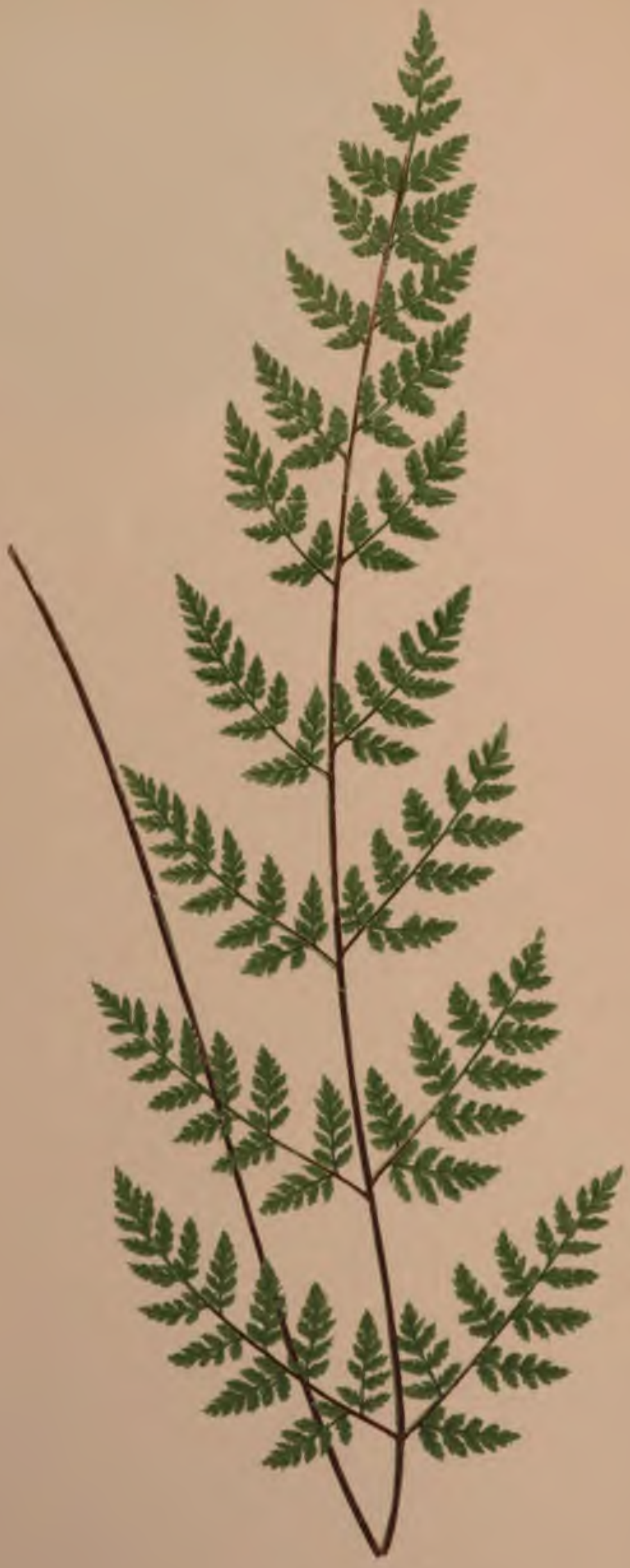
Sori copious, and forming a broad marginal reddish brown belt. Indusium membranous, brown, and contiguous.

Length of frond from twelve to twenty-six inches.

For a plant my thanks are due to Mr. T. Downs, of Illsborough Terrace, Ilfracombe.

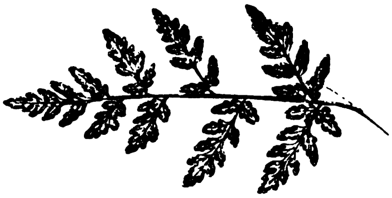
It does not appear in any Nurseryman's Catalogue.

The illustration is from a plant in my own collection.



CHEILANTHES SIEBERI.

XXII—VOL. 4



Pinna of mature Frond—under side.

CHEILANTHES SIEBERI.

KUNZE. HOOKER. FEE.

PLATE XXII. VOL. IV.

Cheilanthes tenuifolia, SIEBER. LINK. (*Not of* SWARTZ, HOOKER, SCHKUHR, *or* WILLDENOW.)

Cheilanthes—From the Greek; *a lip,* and *a flower.*
Sieberi—After Sieber, a botanist.

AN exceedingly handsome species, rare in cultivation.

A greenhouse Fern.

Native of New Holland, Sydney, Swan River, and New Zealand.

Fronds glabrous, subcoriaceous, linear-oblong, and decurrent; pinnules oblong, basal ones inciso-pinnatifid; margins considerably recurved.

Sori punctiform, semi-orbicular, and continuous.

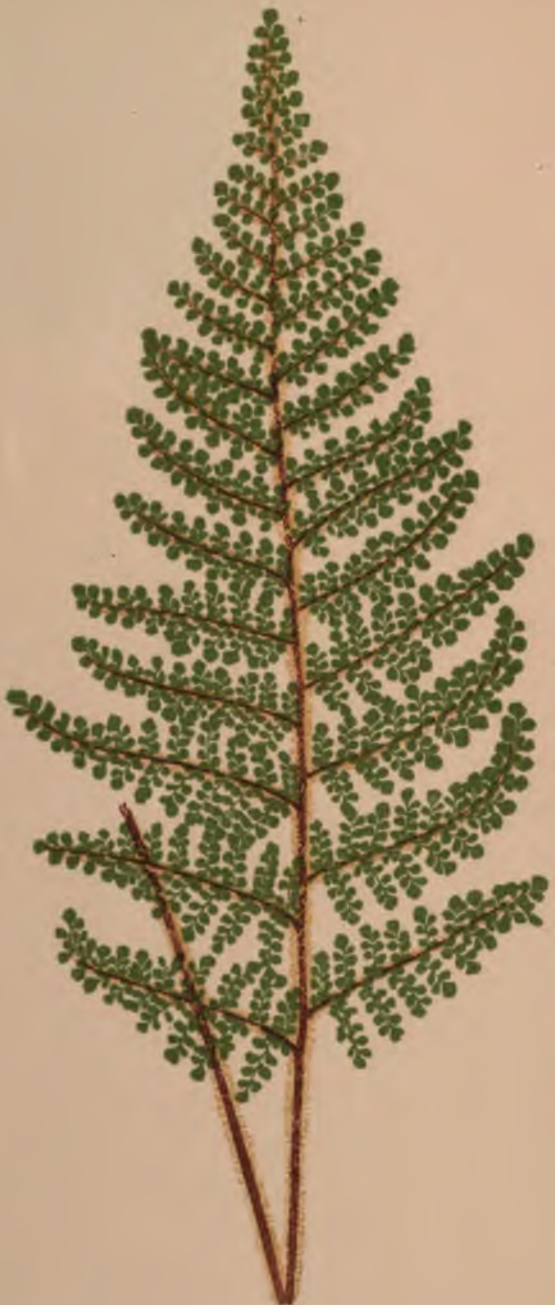
Caudex creeping; stipes and rachis ebeneous.

Length of frond from two to six inches.

For a frond I am indebted to Mr. Joseph Henderson, of Wentworth.

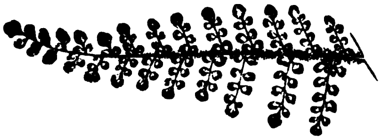
It is in the Catalogue of Messrs. Sim, of Foot's Cray.

The illustration is from Mr. Joseph Henderson's frond.



CHEILANTHES TENUIS.

XXIII—VOL. 4.



Pinna of mature Frond—under side.

CHEILANTHES TENUIS.

PRESL. HOOKER. MOORE AND HOULSTON. LEIBMANN.

PLATE XXIII. VOL. IV.

Cheilanthes—From the Greek; *a lip*, and *a flower*. *Tenuis*—Slender.

A PRETTY dwarf species, rare in cultivation.

An evergreen stove Fern.

Native of Mexico.

The fronds are ovate-lanceolate in form, and tripinnate, the pinnules being oblong; segments minute, somewhat circular, with a wedge-shaped base, crenate, reflexed, and concave.

Frond woolly, terminal, and adherent to a creeping rhizoma.

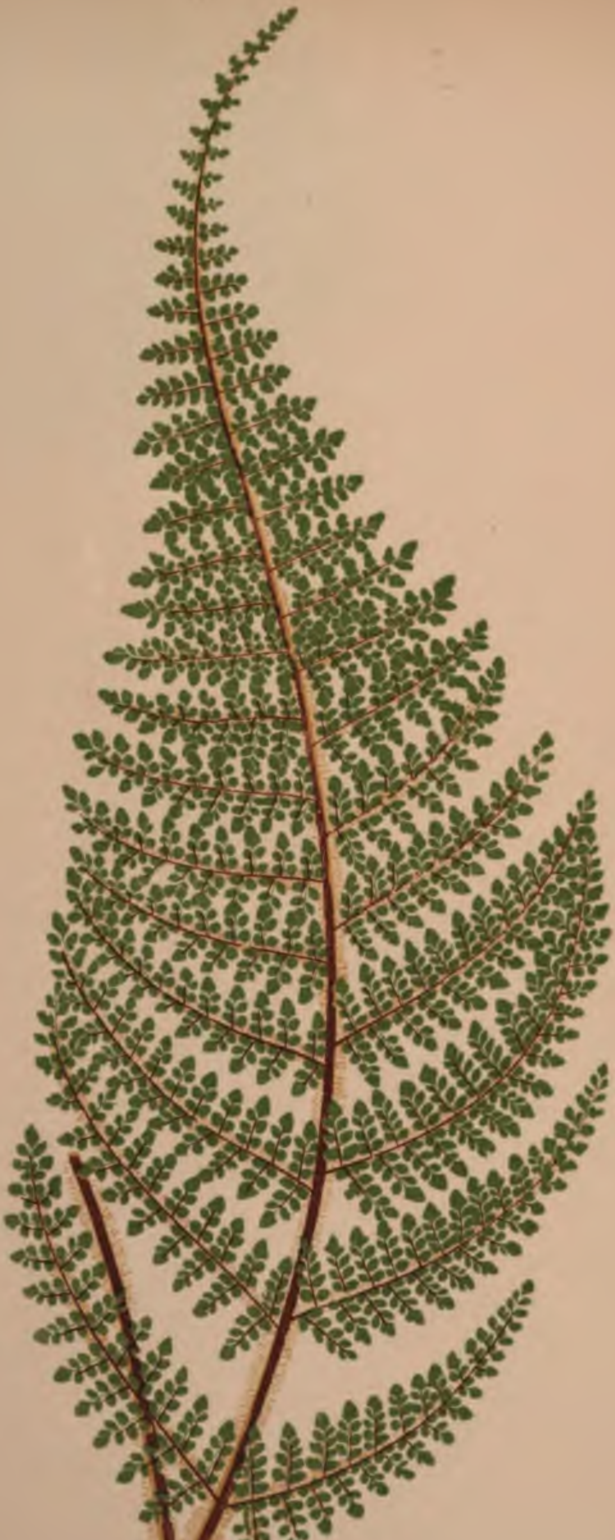
Sori linear, composed of a single row of spore-cases, and in some degree hid in the axis of the broad reflexed margin of each segment. Indusium linear and continuous.

Length of frond twelve inches.

For fronds I am indebted to Mr. Joseph Henderson, of Wentworth.

It is in the Catalogues of Messrs. A. Henderson, of Pine-apple Place, and E. G. Henderson, of St. John's Wood.

The frond illustrated was sent by Mr. Joseph Henderson.



CHEILANTHES LENDIGERA.

XXIV—VOL. 4.

Pinna of mature Frond—under side.

CHEILANTHES LENDIGERA.

SWARTZ. HOOKER.

PLATE XXIV. VOL. IV.

Cheilanthes lentigera,	WILLDENOW. KUNZE. LINK.
" "	PRESL. LEIBMANN. FEE. *(Not of* MARTENS & GALLEOTTI.)
" *lanuginosa,*	MARTENS AND GALLEOTTI.
" *minor,*	MARTENS AND GALLEOTTI.
" *frigida,*	OF GARDENS.
Pteris lendigera,	CAVANILLES.
Myriopteris lendigera,	FEE. SMITH.
Notholæna "	J. SMITH.

Cheilanthes—From the Greek; *a lip,* and *a flower.*
Lendigera—Maggot-bearing.

A VERY handſome Fern, easily grown, and making a good exhibition plant.

An evergreen stove species.

Native of Mexico, Quito, and New Grenada.

Leibmann mentions that it grows in cracks of rocks in community. Luis Née found it at Ixmiquilpan, in Mexico; Schiede also in Malpays de la Hoya; Galleotti on gneis and chrystalline limestone in Misteca alta at Penoles, at an altitude of from six thousand five hundred to eight thousand feet; also in Baranca de Riogrande de Lerma, at an altitude of four thousand feet, and on rocks at Capulalpan, in the Department of Oajaca, at an altitude of from six thousand five hundred to seven thousand five hundred feet; at Moran and Real del Monte from seven thousand eight hundred to eight thousand five hundred feet. Leibmann found it at an altitude of from five thousand to ten thousand feet, in Hyppizhed and Störrelse men Horden; at Hacienda de Sta Anna, in the Department of Oajaca, at five thousand to six thousand feet; at Chinautla, in the Department of Puebla, from seven thousand to eight thousand feet; on Pico de Orizaba in baranks or jungles; about Vaqueria del Jacal at ten thousand feet.

It is a very variable species, increasing in abundance and size with the height. Sometimes bipinnate, at others tripinnate; the pinnules also variable in size, form, and hairyness.

Cheilanthes minor is a form of *C. lendigera;* growing on dry hot cliffs in the lower regions of this species.

This Fern is best known in gardens under the name of *C. frigida.* The *C. lendigera* of gardens is the *C. elegans.*

Fronds ovate-lanceolate, tripinnate. Pinnæ alternate; pinnules orbicular, sessile; sterile pinnules crenate lobate; fertile pinnules sub-globose, owing to the considerable reflection of their margins; glabrous on the upper surface, below densely covered with lengthy hairs.

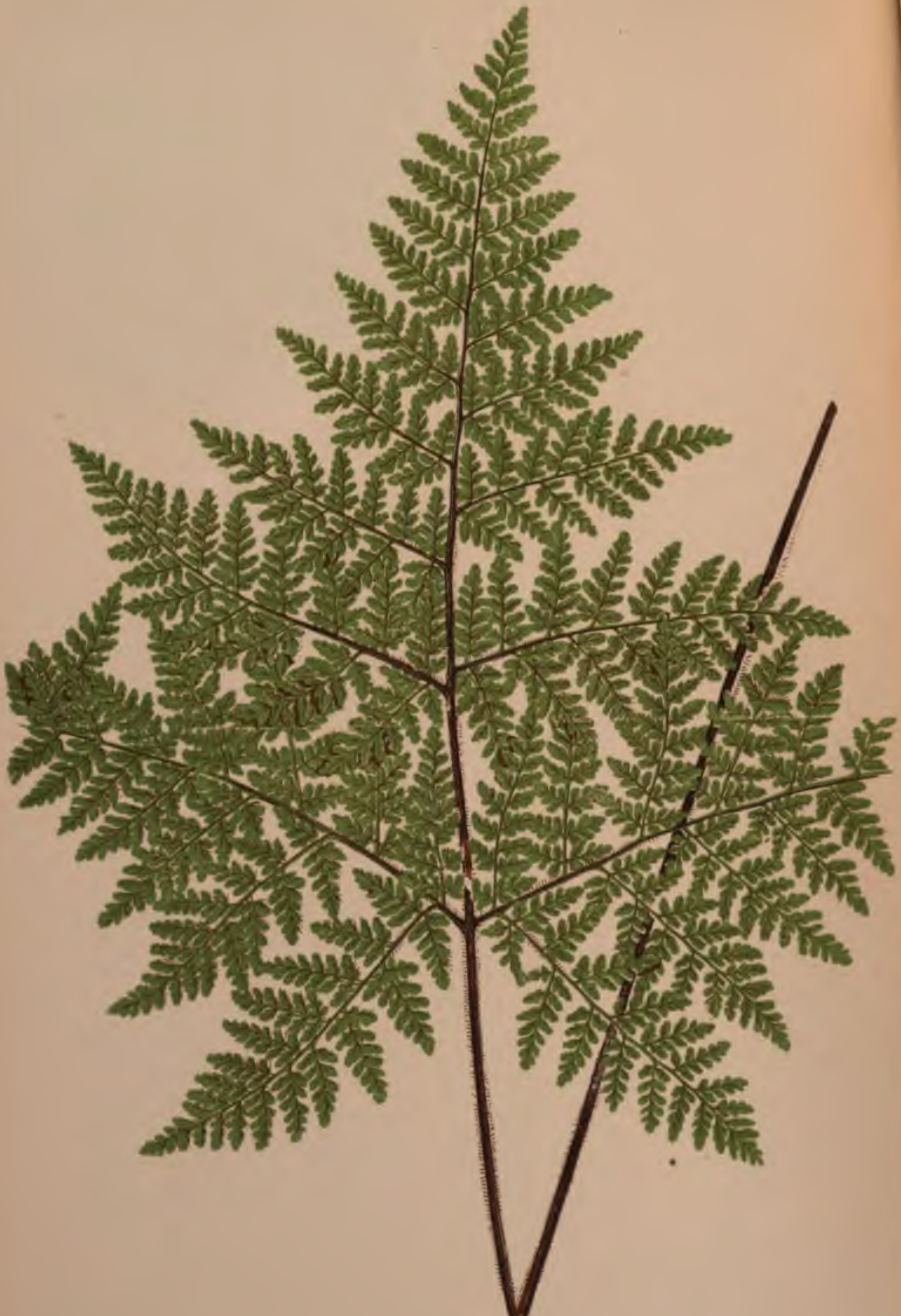
Caudex creeping, and covered with brown chaffy hairs. Stipes and rachis brown, and densely covered with long brown hairs. Indusium membranaceous, forming a broad continuous white marginal belt.

Length of frond from twelve to eighteen inches; colour a dull green.

For a plant my thanks are due to Messrs. Rollisson, of Tooting; and for fronds to Mr. Joseph Henderson, of Wentworth.

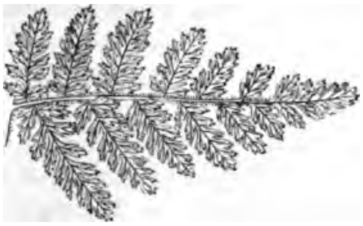
This species may be procured of Messrs. Rollisson, of Tooting; Sim, of Foot's Cray; A. Henderson, of Pine-apple Place; E. G. Henderson, of St. John's Wood; Veitch, of Chelsea; and Cooling, of Derby.

The illustration is from a plant in my own collection.



CHEILANTHES VISCOSA.

XXV—VOL. 1.



Pinna of barren Frond—upper side.

CHEILANTHES VISCOSA.

LINK. HOOKER. PRESL. SMITH. MOORE AND HOULSTON.
LAMARCK. FEE. SCHOTT. (*Not of* CARMICHAEL.)

PLATE XXV. VOL. IV.

Cheilanthes Kaulfussii, KUNZE.

Cheilanthes—From the Greek; *a lip*, and *a flower*.
Viscosa—Clammy, or viscid.

A PRETTY species with triangular-shaped fronds. Rare in cultivation.

An evergreen stove Fern.

Native of Mexico and Central America.

Received at the Royal Gardens, Kew, in 1841, from the Royal Botanic Gardens of Berlin.

Fronds triangular in form, and tripinnate; pinnules oblong-obtuse and pinnatifid; segments (in the sterile frond) dentate. Fronds terminal, being adherent to a brief creeping rhizoma. The fronds entirely covered with viscid glandulose hairs.

Stipes and rachis brown and densely hirsute.

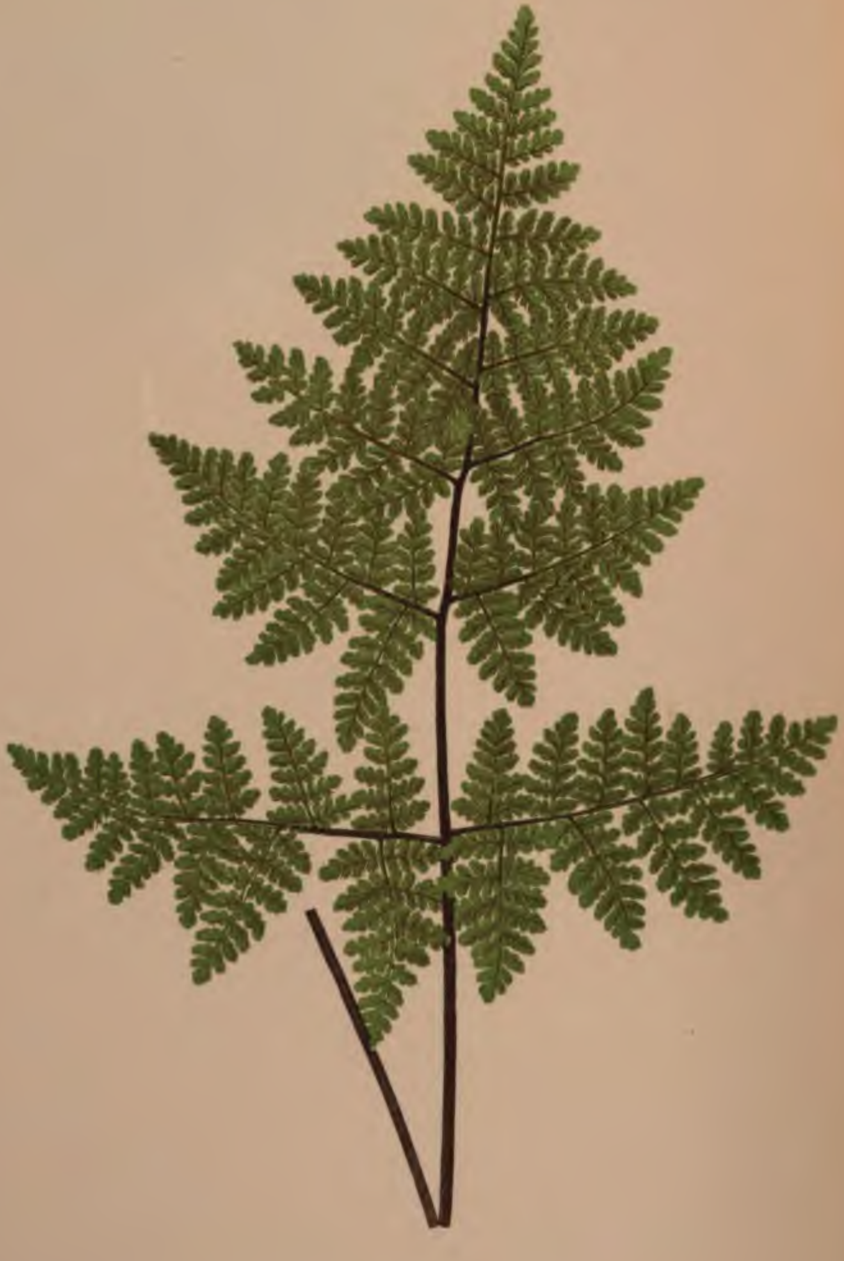
Sori linear and continuous.

Length of frond from twelve to eighteen inches, of which nearly two thirds is naked; colour pale green.

For a plant of this Fern I am indebted to Sir W. J. Hooker, Director of the Royal Gardens, Kew; and for fronds to M. Schott, of the Imperial Gardens of Schonbrünn, near Vienna, and to Mr. R. Sim, of Foot's Cray.

It is in the Catalogues of Messrs. Veitch, Jun., of Chelsea; R. Sim, of Foot's Cray; E. G. Henderson, of St. John's Wood; Booth, of Hamburg; Rollisson, of Tooting; A. Henderson, of Pine-apple Place; and Kennedy, of Covent Garden.

The illustration is from a frond sent by Mr. R. Sim.



CHEILANTHES MULTIFIDA.

XXVI.—VOL. I.

Pinna of mature Frond—under side.

CHEILANTHES MULTIFIDA.

SWARTZ. HOOKER. BLUME. KUNZE. PRESL. FEE.
SCHOTT.

PLATE XXVI. VOL. IV.

Cheilanthes capensis,	ECKL.
Adiantum globatum,	POIRET.

Cheilanthes—From the Greek; *a lip*, and *a flower*. *Multifida*—Many-branched.

A RARE and interesting species.

An evergreen greenhouse Fern.

Native of the Cape of Good Hope, St. Helena, and the mountains of Java.

Fronds triangular, glabrous, deltoid-ovate, and quadripinnate; primary pinnæ sub-opposite, broad, ovate, and petiolate; pinnules oblong and pinnatifid.

Caudex brief, stout, and somewhat creeping, covered with black scales.

Rachis stout, scaly at the base, ebeneous, glossy and black.

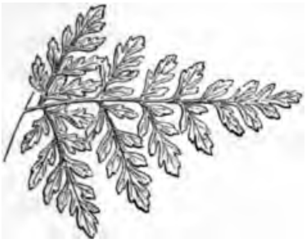
Sori sub-rotund.

Length from four to six inches, a third of which is naked.

For a plant of this Fern I am indebted to M. Schott, Director of the Imperial Gardens, Schonbrünn, Vienna; and for fronds to Mr. G. Norman, of Hull; and to Mr. R. Sim, of Foot's Cray.

This Fern may be procured of R. Sim, of Foot's Cray; and Booth, of Hamburg.

The illustration is from Mr. Sim's frond.



Pinna of mature Frond - upper side.

CHEILANTHES CUNEATA.

LINK. KUNZE. HOOKER. KAULFUSS. FEE.

PLATE XXVII. VOL. IV.

Cassebeera cuneata,	J. SMITH.
Allosorus cuneatus,	PRESL.
" *pulchellus,*	MARTENS AND GALLEOTTI.
Cheilanthes rufescens,	OF CONTINENTAL GARDENS.

Cheilanthes—From the Greek; *a lip,* and *a flower.*
Cuneata—Wedge-shaped.

A RARE and interesting species.

An evergreen stove Fern.

Native of Mexico, from Oaxaca, at an altitude of seven thousand feet; Cerro de Pinel, Sierra Madre, Sierra San Pedro, Nolasca, and Talca.

Received at the Royal Gardens, Kew, in 1854, from Mr. D. Cameron.

Fronds tri-quadripinnate, and cuneate or broadly ovate in form; primary and secondary pinnules ovato-acuminate, the remainder lanceolate-acuminate below, and decurrent; ultimate pinnules acuminate.

Fronds glabrous and sub-coriaceous. Stipes and rachis ebeneous and glossy red, upper side grooved. Caudex brief and creeping.

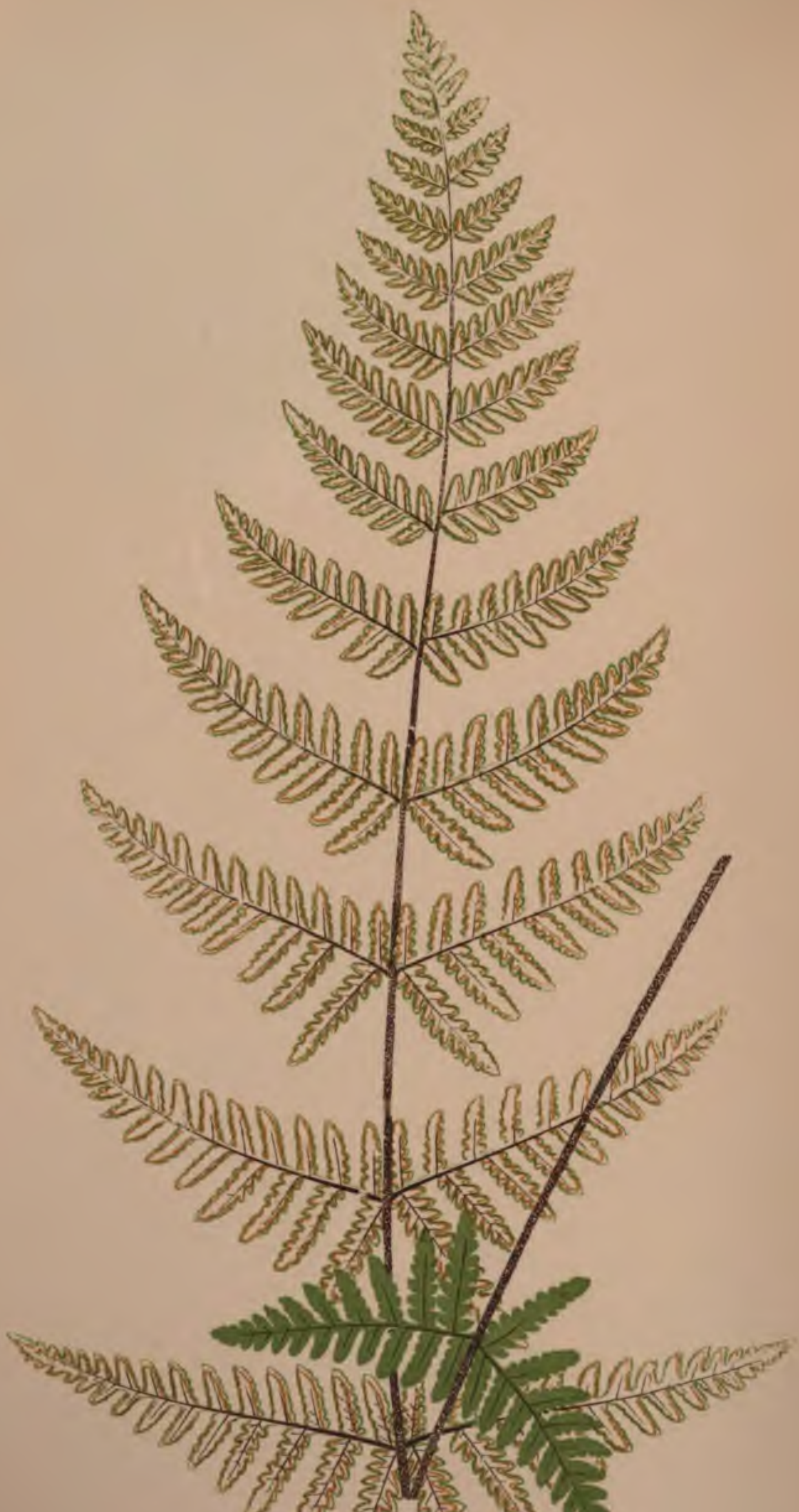
Sori marginal, linear, and continuous.

Length from twelve to eighteen inches, of which more than half is naked; colour a dull green.

For a frond my thanks are due to Mr. R. Sim, of Foot's Cray.

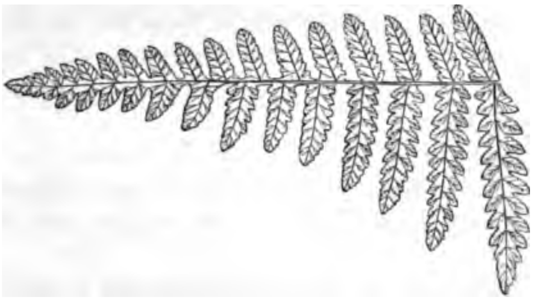
It is in the Catalogues of Mr. R. Sim, of Foot's Cray, and E. G. Henderson, of St. John's Wood.

The illustration is from Mr. Sim's frond.



CHEILANTHES PULVERACEA.

XXVIII—Vol. 3.



Pinna of mature Frond—upper side.

CHEILANTHES PULVERACEA.

Presl. Hooker. Leibmann.

PLATE XXVIII. VOL. IV.

Cheilanthes candida,	Martens and Galleotti.
" "	Kunze.
Allosorus pulveraceus,	Presl.
Aleuritopteris candida,	Fee.
" *argyrophylla, ?*	Fee.
Pteris argyrophylla, ?	Willdenow.

Cheilanthes—From the Greek; *a lip,* and *a flower.* *Pulveracea*—White-powdered.

An exceedingly rare and very handsome Fern, in some degree resembling *Cheilanthes farinosa.*

It was introduced into this country from Berlin, in the year 1857, by Messrs. Low, of Clapham.

An evergreen stove species.

Native of Mexico.

Leibmann, in his "Mexicos Bregner," states that it grows in cracks of rocks in the temperate and cold regions, at an altitude of from three to eight thousand feet above the sea, and is commoner in the higher elevations. He found it between Tonaguia and Roayaga, in the District of Villa Alta in the Department of Oajaca, at an altitude of from five to six thousand feet, also in the neighbourhood of Omegnen of Chinautla, in the Department of Puebla, at an altitude of from seven to eight thousand feet.

Galleotti found it at Rio Grande de Lerma.

The form of the frond is triangular-oblong, glabrous, bipinnatifid, the pinnæ being sub-opposite, sessile, and profoundly pinnatifid.

Segments linear-oblong; apex acuminate and sinuato-dentate.

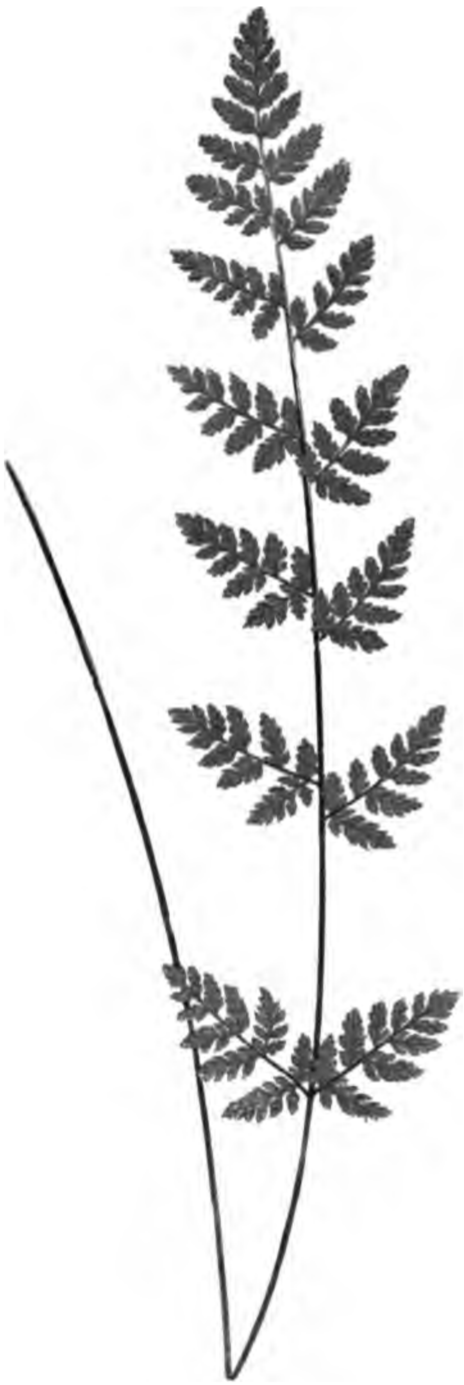
Stipes paleaceous at the base.

Length of frond from twelve to eighteen inches. Colour above deep green, beneath covered with a white farinose powder.

For a frond I am indebted to Mr. R. Sim, of Foot's Cray.

It may be procured of Mr. R. Sim, of Foot's Cray.

The illustration is from Mr. Sim's frond.



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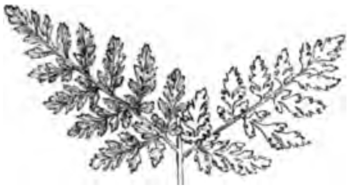
XXIX.—Vol. I.



Portion of mature Frond—under side.

CHEILANTHES PREISSIANA.

KUNZE. HOOKER. SCHOTT.

PLATE XXIX. VOL. IV.

Cheilanthes—From the Greek; *a lip*, and *a flower*.
Preissiana—Named after Preiss.

A RARE distinct species.

An evergreen greenhouse Fern.

Native of New Zealand, New Holland, Island of Bourbon, and Swan River.

Fronds glabrous, coriaceous, elongate, bipinnato-pinnatifid, or tripinnate; the pinnæ triangular-oblong in form, inferior ones distant and sub-opposite; pinnules ovate; base wedge-shaped.

Rachis and stipes ebeneous, purple, and paleaceo-villose. Rhizoma brief, horizontal, and fusco-paleaceous.

Length of frond twelve inches, of which the lower half is naked.

Sori sub-continuous.

My thanks are due to M. Schott, Director of the Imperial Gardens of Schonbrünn, near Vienna, and to Mr. R. Sim, of Foot's Cray, for fronds of this species.

This Fern does not appear in any of the Nurserymen's Catalogues, except that of Mr. R. Sim, of Foot's Cray.

The illustration is from Mr. Sim's frond.

GENUS IX.

DOODIA. R. BROWN.

A SMALL interesting family of dwarf Ferns, all having a rugose habit.

Fronds pinnatifid or pinnate; margins spinulose.

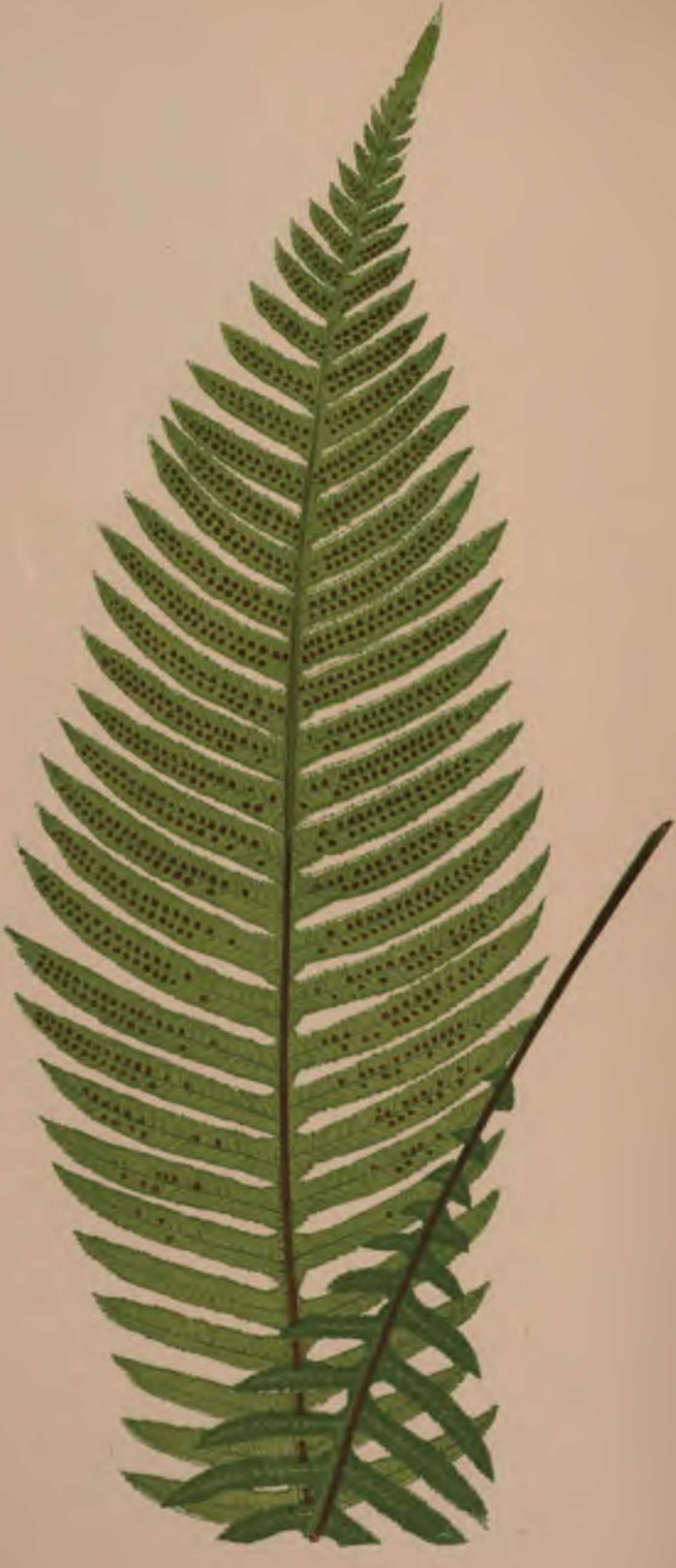
Sori oblong, straight, or arcuated, and transversely uniserial or biserial.

Indusium plane, and of the same form as the sori.

Feè, in his "Genres de la Famile des Polypodiacèes," enumerates the following species:—

1.—*Caudata.*	R. Brown.
2.—*Dives.*	Kunze.
3.—*Lunulata.*	R. Brown.
4.—*Aspera.*	Hooker.
5.—*Kunthiana.*	Gaudichaud.
6.—*Connexa.*	Kunze.
7.—*Blechnoides.*	Cunningham.
8.—*Media.*	R. Brown.
9.—*Virginica.*	Swartz.

There are no British examples.



DOODIA ASPERA.

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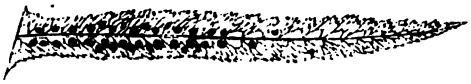


Pinna of mature Frond—under side.

DOODIA ASPERA.

Brown. Smith. Hooker. Schott. Sprengel.
Kaulfuss. Presl. Moore and Houlston.

PLATE XXX. VOL. IV.

Doodya aspera,	Kunze. Link.
Woodwardia aspera,	Fee.

Doodia—Named after Mr. Doody, a botanist. *Aspera*—Rough, in reference to the rough stalks.

A pretty, evergreen, stiff-habited, greenhouse Fern.

Native of New Holland and Australia.

Received into the Royal Gardens, Kew, in 1808, from Mr. Caley.

Fronds lanceolate and pinnatifid; segments linear-acuminate, sub-falcate, and having a spinulose-serrate margin; rigid; widest in the centre of the frond; apex acuminate.

Veins forked.

Sori uniserial or biserial.

Rachis and stipes scaly, dark brown at the base.

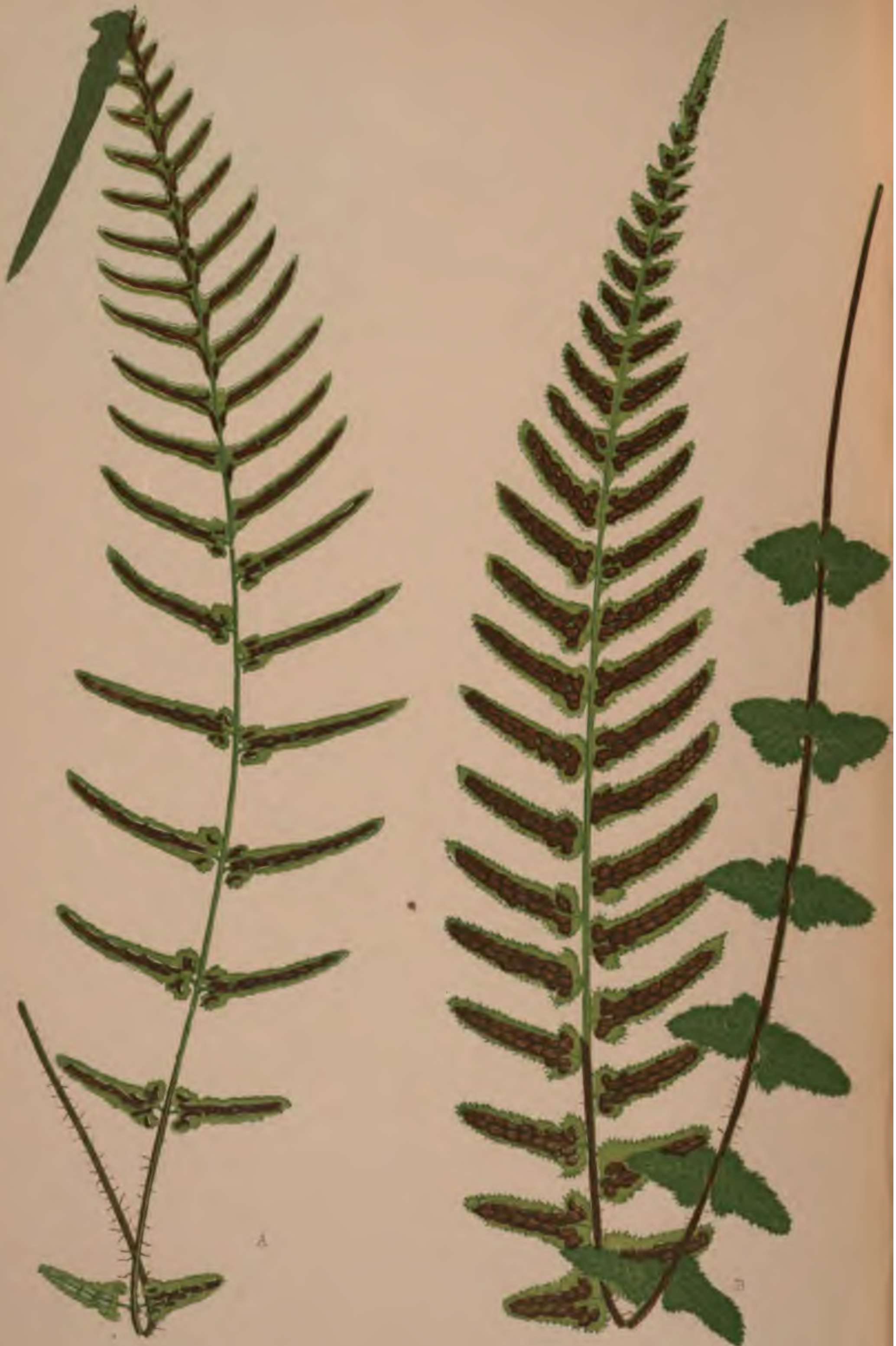
Fronds terminal, being adherent to a brief creeping rhizoma.

Length of frond ten inches; colour a dull heavy green.

For a plant my thanks are due to Mr. Joseph Henderson, of Wentworth; and for fronds to M. Schott, Director of the Imperial Gardens of Schonbrünn, and to Mr. G. Norman, of Hull.

This species may be procured of Messrs. R. Sim, of Foot's Cray; E. G. Henderson, of St. John's Wood; Booth, of Hamburg; Rollisson, of Tooting; A. Henderson, of Pine-apple Place; Kennedy, of Covent Garden; Stansfield, of Todmorden; Young, of Taunton; Veitch, Jun., of Chelsea; and Cooling, of Derby.

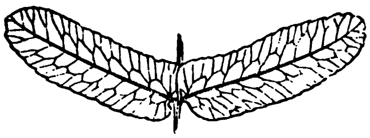
The illustration is from a plant in my own collection.



DOODIA CAUDATA.

D. LUNDIANA.

XXXI—Vol. 4.



Pinnæ of barren Frond—under side.

DOODIA CAUDATA.

Brown. Smith. Moore and Houlston. Schott.

PLATE XXXI.—A. VOL. IV.

Doodia rupestris,	Kaulfuss. Sieber.
" "	Presl. Schott.
Doodya caudata,	Kunze.
" *rupestris,*	Link.
Woodwardia caudata,	Fee.

Doodia—Named after Mr. Doody, a botanist. *Caudata*—Tailed.

A common species in English greenhouses, easily cultivated, and propagating so freely from spores, that it comes up in almost every Fern-pan.

An evergreen greenhouse Fern.

Native of New Holland, Australia, and Tasmania, (Van Dieman's Land.)

Raised from spores at the Royal Gardens, Kew, in 1830.

Fertile and sterile fronds different. Sterile fronds pinnate, linear-oblong in form, and glabrous; pinnæ oblong-obtuse, inferior ones petiolate, the superior ones adnate. The margin of the frond spinuloso-serrate. Fertile fronds contracted, linear-lanceolate in form, also glabrous; pinnate, the pinnæ being linear and bluntly-acuminate; terminal pinna caudate, and often an inch and a half long.

Fronds terminal, and adherent to a slightly creeping rhizoma. The base only naked.

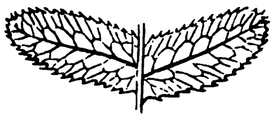
Veins forked; venules arcuately anastomosing near the base, direct and free towards the margin.

Sori usually transversely uniserial.

Length of sterile frond from four to six inches; length of fertile frond from six to eight inches. Colour pale green.

Doodia caudata can be procured of every Nurseryman.

The illustration is from a plant in my own collection.



Pinnæ of mature Frond—upper side.

DOODIA LUNULATA.

BROWN. SMITH.

PLATE XXXI.—B. VOL. IV.

Doodia media,	BROWN. MOORE AND HOULSTON.
" *crenulata,*	SCHOTT.
Doodya lunulata,	KUNZE.
Woodwardia lunulata,	FEE.

Doodia—Named after Mr. Doody, a botanist. *Lunulata*—Crescent-leaved.

AN evergreen greenhouse species, with a graceful appearance.

Native of New Zealand, New Holland, and Norfolk Island.

Raised from spores in the Royal Gardens, Kew, in 1834.

The fronds, which are slender, pendulous, and narrow lanceolate in form, are pinnate, the pinnæ being oblong-obtuse, rigid, and rugose: superior pinnæ sessile, with a spinulose-serrate margin; inferior pinnæ petiolate and cordate-auriculate. Pinnæ widest in the centre of the frond, becoming less both towards the base and apex. Base of the stipes scaly.

Stipes and rachis pink.

Fronds terminal, and adherent to a brief creeping rhizoma.

Sori uniserial or biserial.

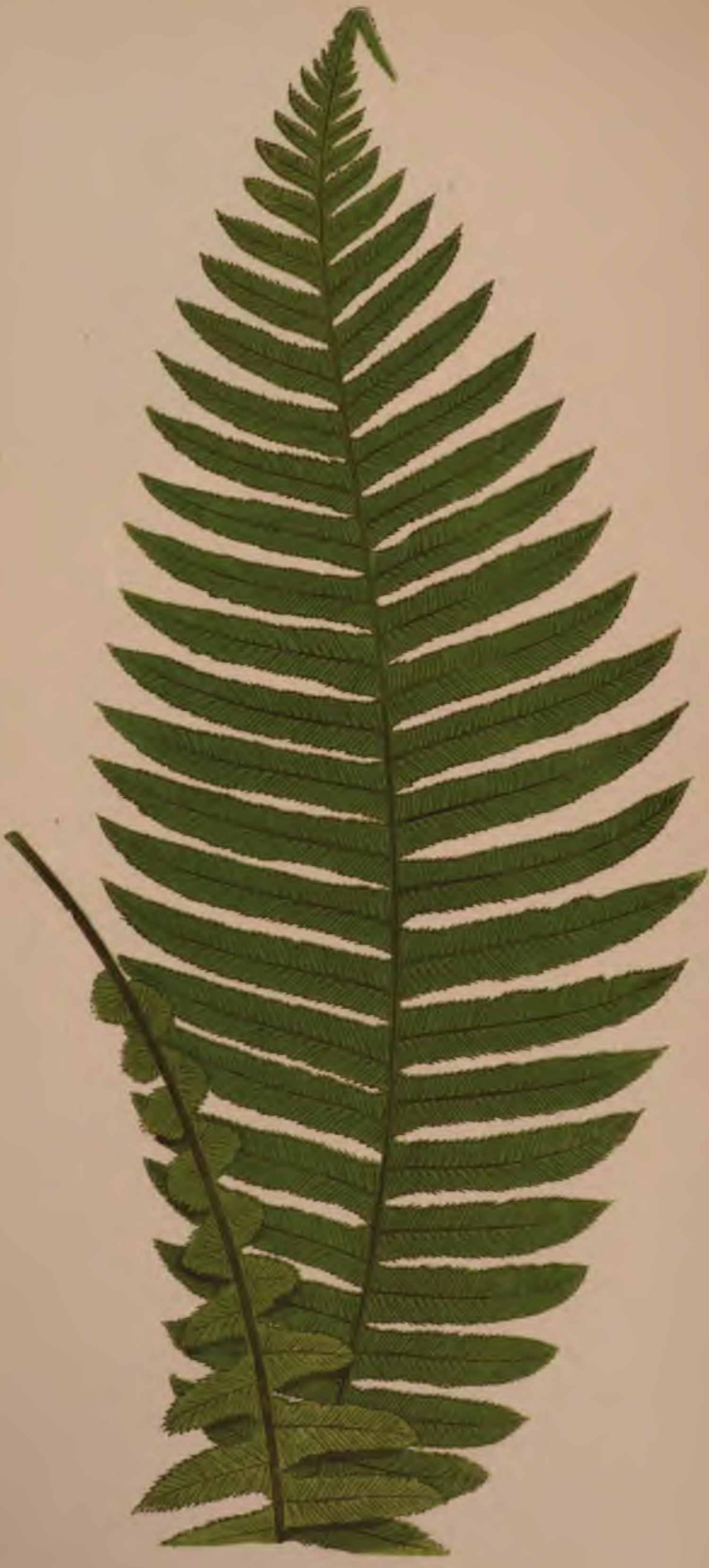
Veins forked.

Length of frond from twelve to eighteen inches, dull green in colour; the young fronds of a delicate red colour.

For plants of this species my thanks are due to Sir W. J. Hooker, Director of the Royal Gardens, Kew; Mr. T. Moore, Curator of the Botanic Gardens, Chelsea; and to Mr. Joseph Henderson, of Wentworth.

It may be procured from Messrs. R. Sim, of Foot's Cray; E. G. Henderson, of St. John's Wood; Booth, of Hamburg; A. Henderson, of Pine-apple Place; Kennedy, of Covent Garden; Masters, of Canterbury; Stansfield, of Todmorden; Young, of Taunton; Veitch, Jun., of Chelsea; and E. Cooling, of Derby.

The illustration is from a plant in my own collection.



DOODIA BLECHNOIDES

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Pinna of mature Frond—under side.

DOODIA BLECHNOIDES.

A. Cunningham. Metten. J. Smith. Moore and Houlston.

PLATE XXXII.

Doodia maxima,	J. Smith.
Doodya blechnoides,	Kunze.
Woodwardia blechnoides,	Fee.

Doodia—Named after Mr. Doody, a botanist. *Blechnoides*—Blechnum-like.

A Blechnum-looking Doodia, not common in cultivation in this country.

It was raised from spores in the Royal Gardens, Kew, in 1835.

An evergreen greenhouse species.

Native of New Holland.

The fronds, which are rigid, are broadly-lanceolate and pinnatifid; segments lanceolate, approximate, and repand, with a spinulose-serrate margin.

Stipes completely buried under black scales.

Fronds terminal, and adherent to an erect fasciculate rhizoma.

Sori uniserial.

Length of frond from twelve to eighteen inches; colour a dull heavy green.

For fronds my thanks are due to Mr. J. Smith, Curator of the Royal Gardens, Kew; and to Mr. Sim, of Foot's Cray.

It may be procured of Messrs. Sim, of Foot's Cray; and Rollisson, of Tooting.

The illustration is from Mr. Smith's frond.

GENUS X.

BLECHNUM. Linnæus.

Fronds either simple, pinnatifid, or pinnate. Pinnæ adherent, or articulated with the rachis. Veins forked, those of the fertile fronds combined near their base at the point of forking by a transverse vein, and forming the sporangiferous receptacle, mostly situated near the midrib.

Fertile fronds not contracted.

Sori linear, mostly continuous, yet sometimes interrupted.

All natives of warm climates, and easily cultivated.

Length of fronds from six inches to six feet.

There is no British example.

Presl, in his "Tentamen Pteridographiæ," gives the following:—

Blechnum lanceola
" trifoliatum
" unilaterale
" glandulosum
" pohlianum
" asplenioides
" triangulare
" distans
" longifolium
" auriculatum
" integerrimum
" procerum
" scandens
" brasiliense

Blechnum radiatum
" finlaysonianum
" cartilagineum
" caudatum
" meridionale
" australe
" rigidum
" occidentale
" ciliatum
" stramineum
" orientale
" latifolium
" ambiguum
" fontanesianum

Blechnum trilobum
" hastatum
" remotum
" gracile
" silicifolium
" angustifolium
" serrulatum
" fraxineum
" appendiculatum
" elongatum
" pectinatum
" striatum
" volubile
" flabellatum

Fee, in his "Genres de la Famille des Polypodiacées," enumerates the following:—

Lanceola, *Swartz.*
Unilaterale, *Willdenow.*
Heterocarpon, *Fee.*

Asplenioides, *Swartz.*
Glandulosum, *Link.*
Meridionale, *Presl.*

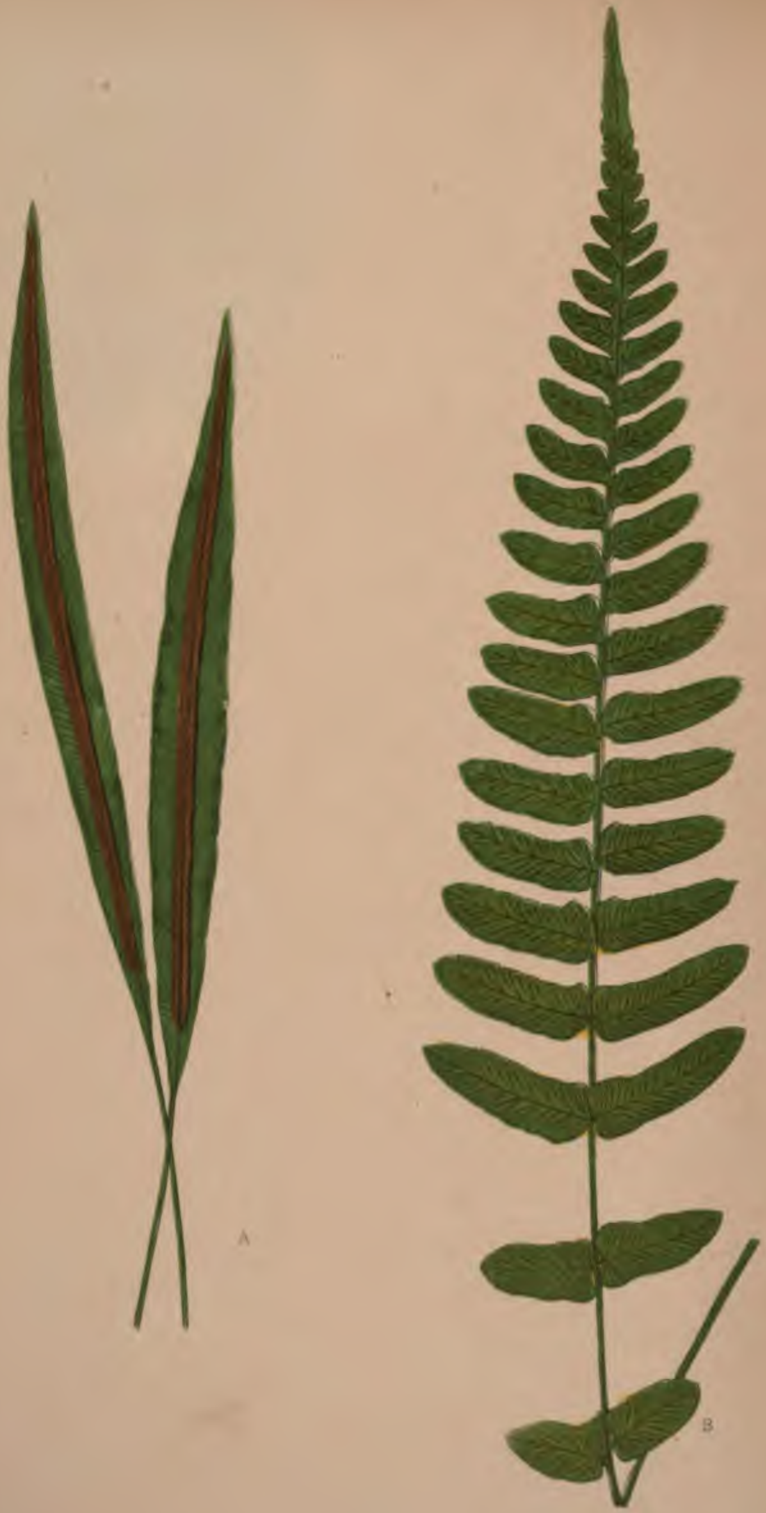
Occidentale, *Linnæus.*
Caudatum, *Cavanilles.*
Validum, *Fee.*
Helveolum, *Fee.*
Acuminatum, *Fee.*
Impressum, *Fee.*
Extensum, *Fee.*
Pectinatum, *Hooker.*
Falciculatum, *Presl.*
Cognatum, *Presl.*
Ciliatum, *Galleotti.*
Pubescens, *Desvaux.*
Distans, *Presl.*
Intermedium, *Link.*
Gracile, *Kaulfuss.*
Longifolium, *Hooker.*
Arcuatum, *Remy.*
Meridense, *Klotzsch.*
Cartilagineum, *Swartz.*
Brasiliense, *Desvaux.*
Pyrophyllum, *Blume.*
Stenophyllum, *Fee.*
Serrulatum, *Richard.*
Striatum, *R. Brown.*
Malaccense, *Fee.*
Stramineum, *Labillardiere.*
Fraxineum, *Fee.*
Remotum, *Presl.*
Hastatum, *Kaulfuss.*
Trilobum, *Presl.*
Australe, *Linnæus.*
Punctulatum, *Swartz.*
Rigidum, *Swartz.*

Smith, in his Catalogue of Ferns cultivated in the Royal Gardens of Kew, enumerates the following:—

Lanceola, *Swartz.*
Polypodioides, *Raddi.*
Glandulosum, *Link.*
Cognatum, *Presl.*
Triangulatum, *Link.*
Occidentale, *Linnæus.*
Gracile, *Kaulfuss.*
Longifolium, *Hooker.*
Hastatum, *Kaulfuss.*
Brasiliense, *Desvaux.*
Cartilagineum, *Swartz.*
Orientale, *Linnæus.*
Serrulatum, *Richard.*

Kunze, in his "Index Filicum," gives the following as cultivated in Europe:—

Brasiliense, *Desvaux.*
Cartilagineum, *Swartz.*
Falcatum, *Loddiges.*
Glandulosum, *Kaulfuss.*
Gracile, *Kaulfuss.*
Intermedium, *Link.*
Lœvigatum, *Cavanilles.*
Lanceola, *Swartz.*
Longifolium, *Hooker.*
Occidentale, *Linnæus.*
Orientale, *Linnæus.*
Pectinatum, *Presl.*
Polypodioides, *Raddi.*
Serrulatum, *Richard.*
Striatum, *Brown.*
Triangulare, *Sprengel.*
Volubile, *Kaulfuss.*



BLECHNUM LANCEOLA. B. HASTATUM.

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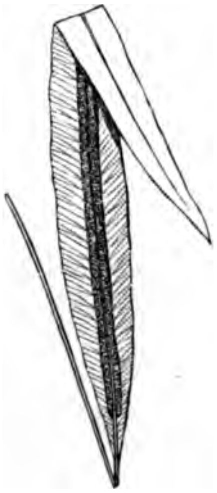


Fertile frond—under side.

BLECHNUM LANCEOLA.

Swartz. J. Smith. Loddiges. Hooker. Kunze. Presl.
Moore and Houlston. Fee. Schott. Link.

PLATE XXXIII.—A. VOL. IV.

Blechnum lanceolatum, Raddi.

Blechnum—From *Blechnon,* the Greek name for a Fern.
Lanceola—Lance-leaved.

An interesting, dwarf, evergreen, stove species.

Native of Brazil.

Received into the Royal Gardens, Kew, from the Royal Botanic Gardens of Berlin, in 1841.

The fronds, which are glabrous, are simple and lanceolate in shape.

Stipes scaly near the base.

Fronds terminal; adherent to a creeping rhizoma.

Nearly all the fronds are fertile.

Sori linear and continuous.

Length of frond six inches; colour deep green.

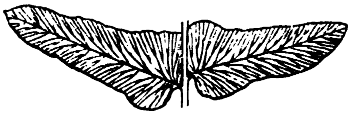
Veins forked.

This Fern cannot be confused with any other.

For a plant of this species I am indebted to Mr. Joseph Henderson, of Wentworth; and for fronds to M. Schott, Director of the Imperial Gardens of Schonbrünn, and to Mr. G. Norman, of Hull.

It is in the Catalogues of Messrs. Sim, of Foot's Cray; Veitch, of Chelsea; E. G. Henderson, of St. John's Wood; Rollisson, of Tooting; Booth, of Hamburg; A. Henderson, of Pine-apple Place; Kennedy, of Covent Garden; Stansfield, of Todmorden; and Cooling, of Derby.

The illustration is from a plant in my own collection.



Portion of barren Frond.

BLECHNUM HASTATUM.

KAULFUSS. J. SMITH. MOORE AND HOULSTON. PRESL. FEE. SCHOTT. LINK.

PLATE XXXIII.—B. VOL. IV.

Blechnum trilobum,	PRESL. HOOKER AND GREVILLE.
Lomaria hastata,	KUNZE.
Tænitis sagittifera,	BORY.

Blechnum—From *Blechnon,* the Greek name for a Fern.
Hastatum—Halbert-shaped.

AN evergreen stove species.

Native of Chili.

Received into the Royal Gardens, Kew, from the Royal Botanic Gardens of Berlin, in the year 1841.

Fronds glabrous, lanceolate in shape, and pinnate; the pinnæ linear-lanceolate, acute, petiolulate, and falcate, inferior pinnæ hastate, superior sessile, and auriculate at the base.

Veins forked.

Stipes at the base scaly.

Fronds terminal, being adherent to a creeping rhizoma.

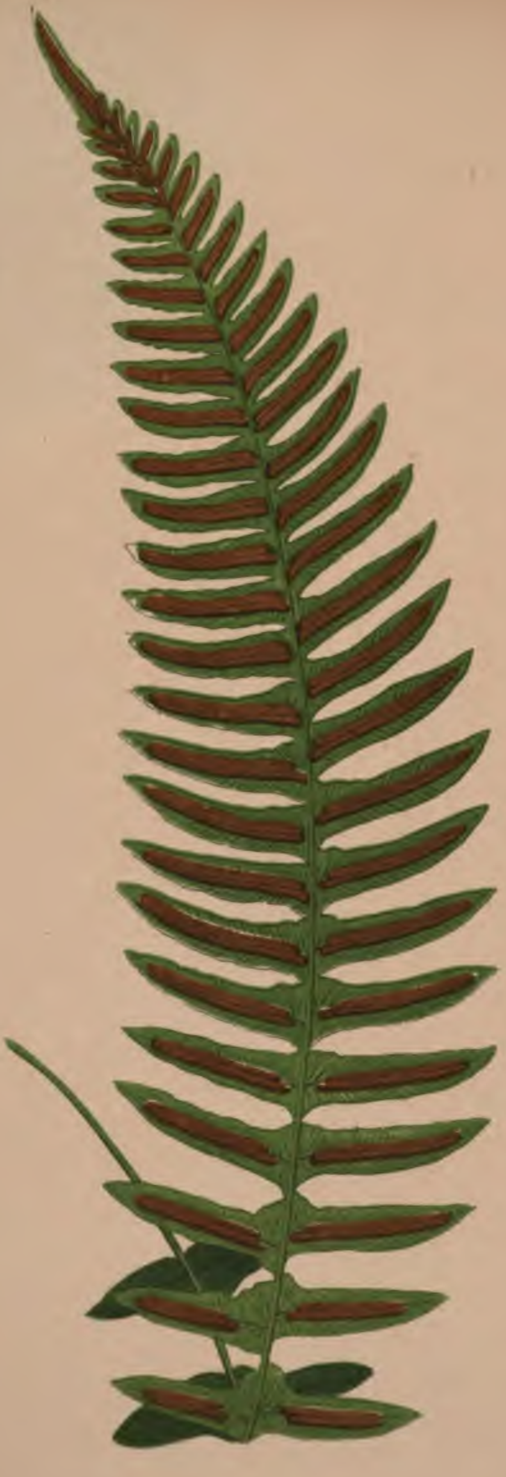
Sori linear, medial, continuous or interrupted; margin of the indusium fringed.

Length from twelve to eighteen inches; colour pale green.

For a plant of this Fern I am indebted to Sir W. J. Hooker, Director of the Royal Gardens, Kew; and for fronds to M. Schott, Director of the Imperial Gardens of Schonbrünn, near Vienna.

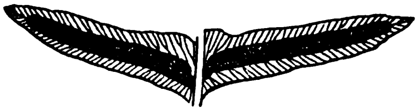
It may be procured of any Nurseryman.

The illustration is from Sir W. Hooker's frond.



BLECHNUM POLYPODIOIDES.

XXXIV—Vol. 4.



Pinna of fertile Frond—under side.

BLECHNUM POLYPODIOIDES.

RADDI. KUNZE. J. SMITH. LEIBMANN.

PLATE XXXIV. VOL. IV.

Blechnum unilaterale, WILLDENOW. FEE.

Blechnum—From *Blechnon*, the Greek name for a Fern.
Polypodioides—Polypodium-like.

AN evergreen stove species.

Native of Mexico, Brazil, and Peru.

Introduced into the Royal Gardens, Kew, in 1848.

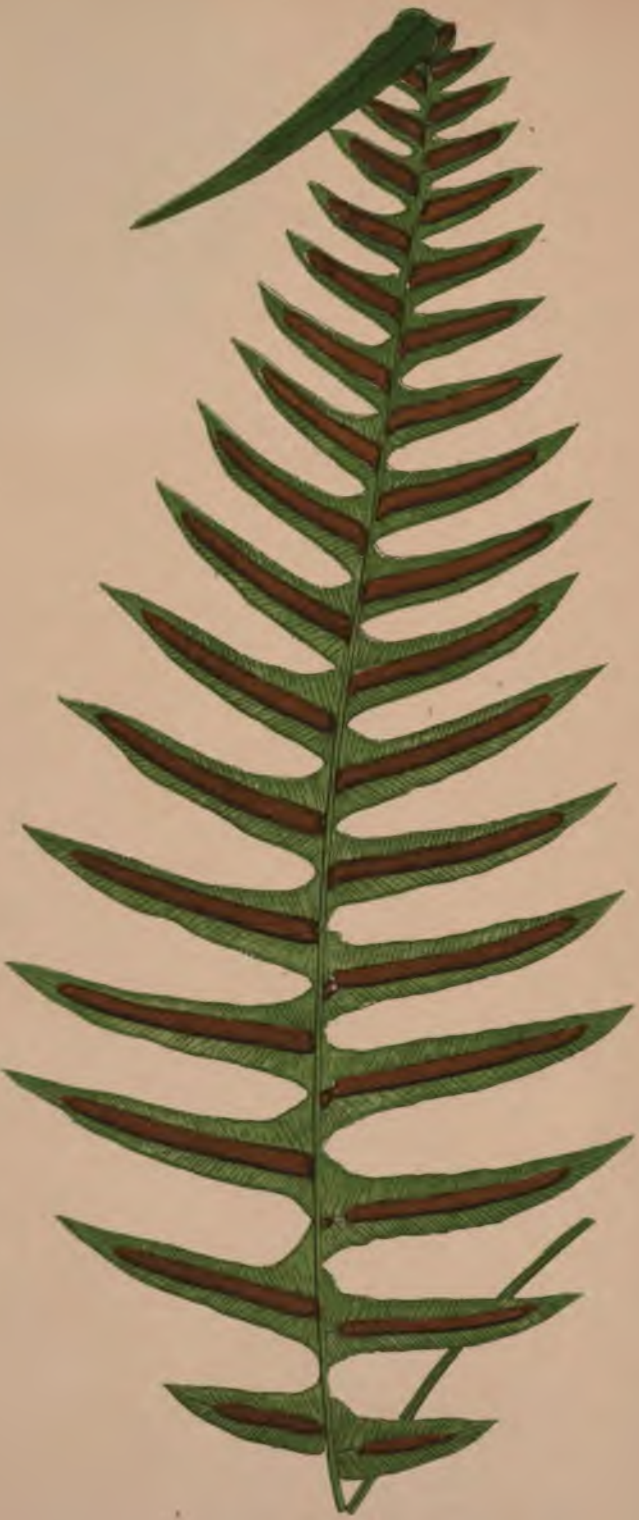
The fronds, which are tapering, and only two inches wide, are pinnatifid, except at the base, where pinnate; segments adnate, falcate, or sub-falcate, auriculated upwards, and abbreviated and confluent towards the short caudate apex; costa and rachis glanduloso-pubescent. Sori unequal at the base, the uppermost shorter.

Stipes short and glanduloso-pubescent, the base covered with narrow scales.

Length of frond twelve to eighteen inches; colour deep green.

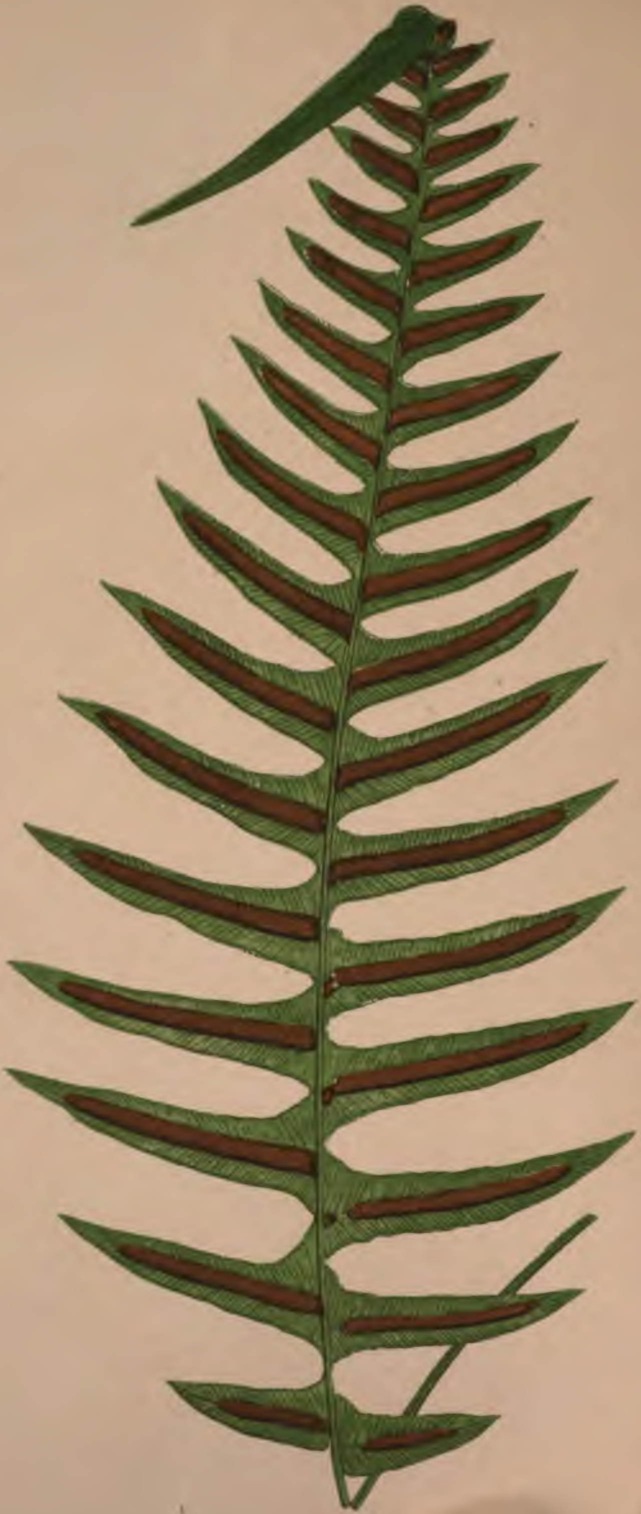
For a plant my thanks are due to Mr. Lamb, gardener to Mr. F. Wright, of Osmaston Manor; and for fronds to Mr. Joseph Henderson, of Wentworth.

The young fronds have that beautiful pink hue which is so



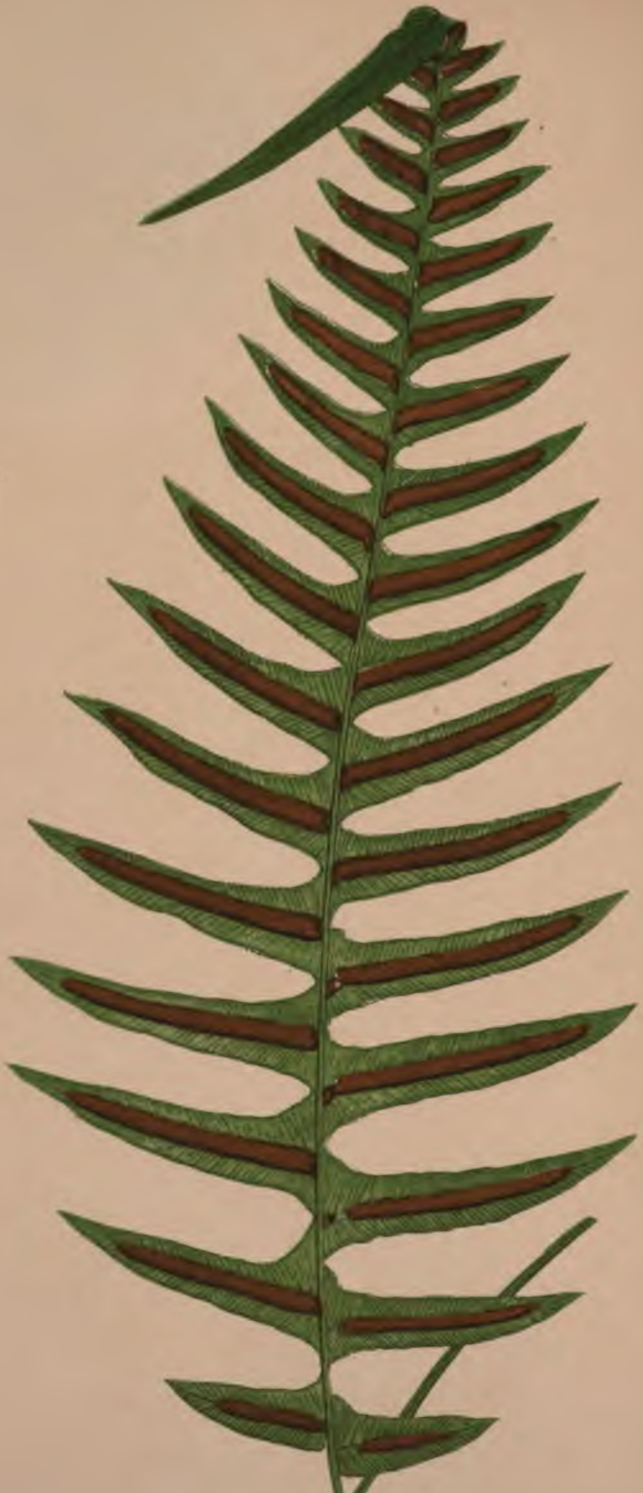
BLECHNUM TRIANGULATUM.

XXXV—VOL. 4.



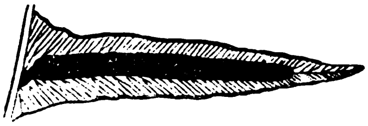
BLECHNUM TRIA

XXXV—V



BLECHNUM TRIANGULATUM.

XXXV—VOL. I.



Pinna of fertile Frond—under side.

BLECHNUM TRIANGULATUM.

LINK. J. SMITH.

PLATE XXXV. VOL. IV.

Blechnum triangulare,	LINK. SPRENGEL. KUNZE.
" "	PRESL. SCHOTT.

Blechnum—From *Blechnon,* the Greek name for a Fern.
Triangulatum—Three-angled.

AN evergreen erect-growing stove species.

Native of Mexico.

Received into the Royal Gardens, Kew, from the Royal Botanic Gardens of Berlin, in 1841.

Fronds glabrous, pinnate, lanceolate in form, the pinnæ mostly alternate, sessile, oblong-acuminate, and in some degree falcate; inferior pinnæ remote; terminal pinna entire and caudate.

Fronds terminal, and adherent to a creeping rhizoma.

Stipes scaly.

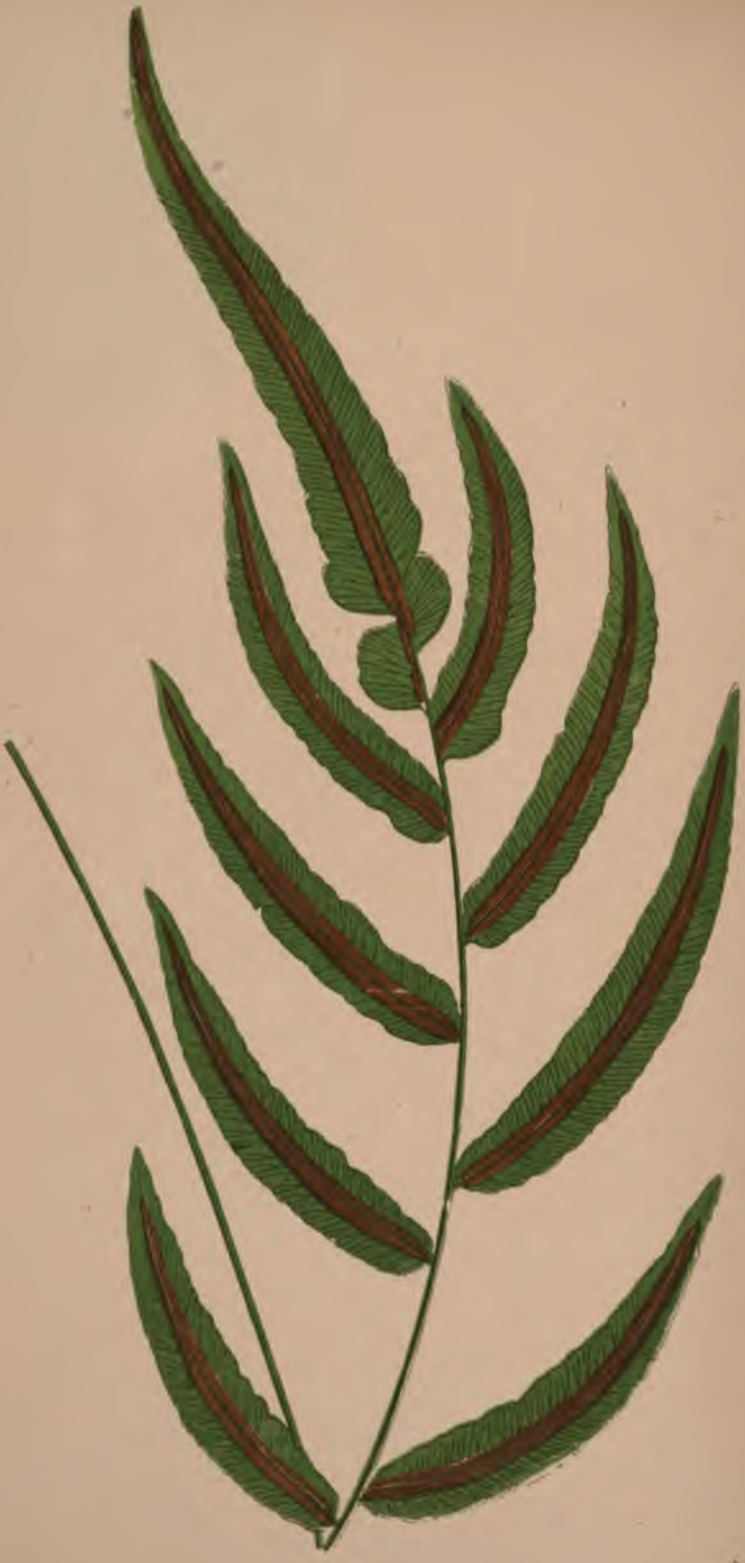
Sori continuous. Veins forked.

Length from twelve to eighteen inches; colour deep green.

For a plant my thanks are due to Mr. R. Sim, Nurseryman, Foot's Cray, Kent; and for fronds to M. Schott, Director of the Imperial Gardens of Schonbrünn; Mr. Joseph Henderson, of Wentworth; and to Mr. G. Norman, of Hull.

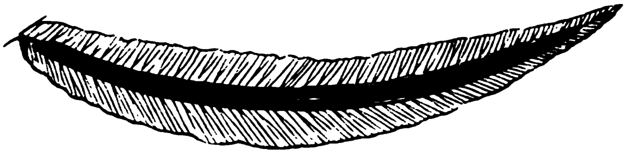
It may be procured of Messrs. Rollisson, of Tooting; Sim, of Foot's Cray; A. Henderson, of Pine-apple Place; Booth, of Hamburg; Kennedy, of Covent Garden; and Cooling, of Derby.

The illustration is from a frond forwarded by Mr. G. Norman, of Hull.



BLECHNUM GRACILE.

XXXVI—Vol. 4.



Pinna of fertile Frond—under side.

BLECHNUM GRACILE.

KAULFUSS. LODDIGES. J. SMITH. MOORE AND HOULSTON.
KUNZE. PRESL. FEE. SCHOTT. LINK.

PLATE XXXVI. VOL. IV.

Blechnum—From *Blechnon*, the Greek name for a Fern.
Gracile—Slender.

A HANDSOME evergreen stove Fern.

Native of Brazil.

Received into the Royal Gardens, Kew, in 1834.

The fronds are slender, glabrous, and pinnate; the pinnæ lanceolate and sub-falcate; inferior petiolulate, superior adnate, terminal pinna elongate.

Rachis and stipes red, and slightly scaly near the base.

Fronds terminal, and adherent to a creeping rhizoma.

Sori linear and continuous.

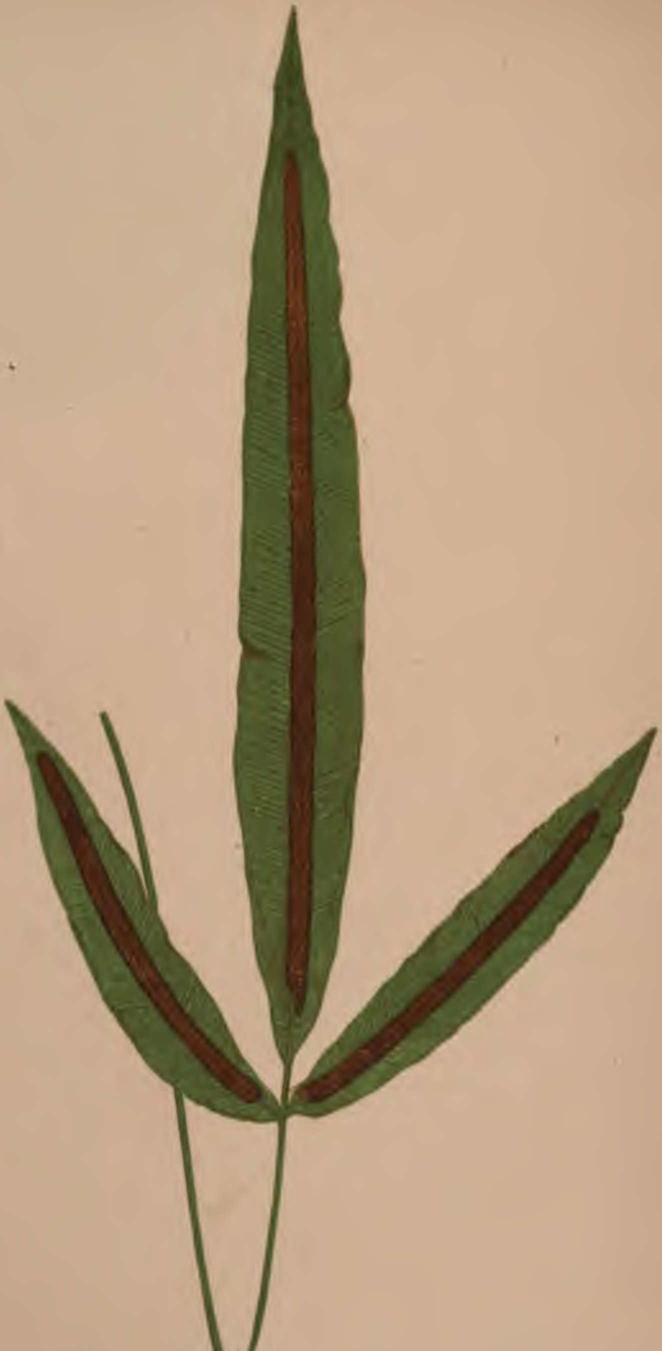
Veins forked.

Length of frond from twelve to eighteen inches; colour deep green.

For plants of this species my thanks are due to Sir W. J. Hooker, Director of the Royal Gardens, Kew; Mr. Clark, Curator of the Royal Botanic Gardens, Glasgow; and to Mr. R. Sim, of Foot's Cray; and for fronds to M. Schott, Director of the Imperial Gardens of Schonbrünn, and to Mr. G. Norman, of Hull.

It may be procured of any Nurseryman.

The illustration is from a plant in my own collection.



BLECHNUM LONGIFOLIUM.

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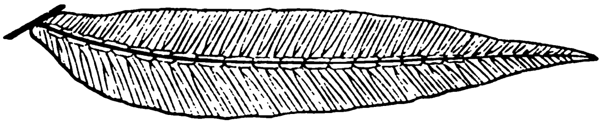


Pinna of barren Frond—upper side.

BLECHNUM LONGIFOLIUM.

HOOKER AND BONPLAND. J. SMITH. HUMBOLDT. KUNZE.
PRESL. FEE.

PLATE XXXVII. VOL. IV.

Blechnum intermedium,	LINK. LEIBMANN. KUNZE. SCHOTT.
" *trifoliatum,*	KAULFUSS.

Blechnum—From *Blechnon,* the Greek name for a Fern.
Longifolium—Long-leaved.

AN evergreen stove species.

Native of the Island of Trinidad, and the temperate regions of Mexico.

Raised from spores in the Royal Gardens, Kew, in 1833.

Fronds glabrous, pinnate; the pinnæ oblong-ovate, obtuse; the terminal pinna elongate, and much larger. Lower pinnæ petiolulate; the upper ones adnate.

Fronds terminal, and adherent to a creeping rhizoma.

Rachis and stipes reddish, slightly scaly near the base.

Sori linear and continuous.

Veins forked.

There are only two pairs of pinnæ on each frond, and a terminal one, the latter being four inches in length.

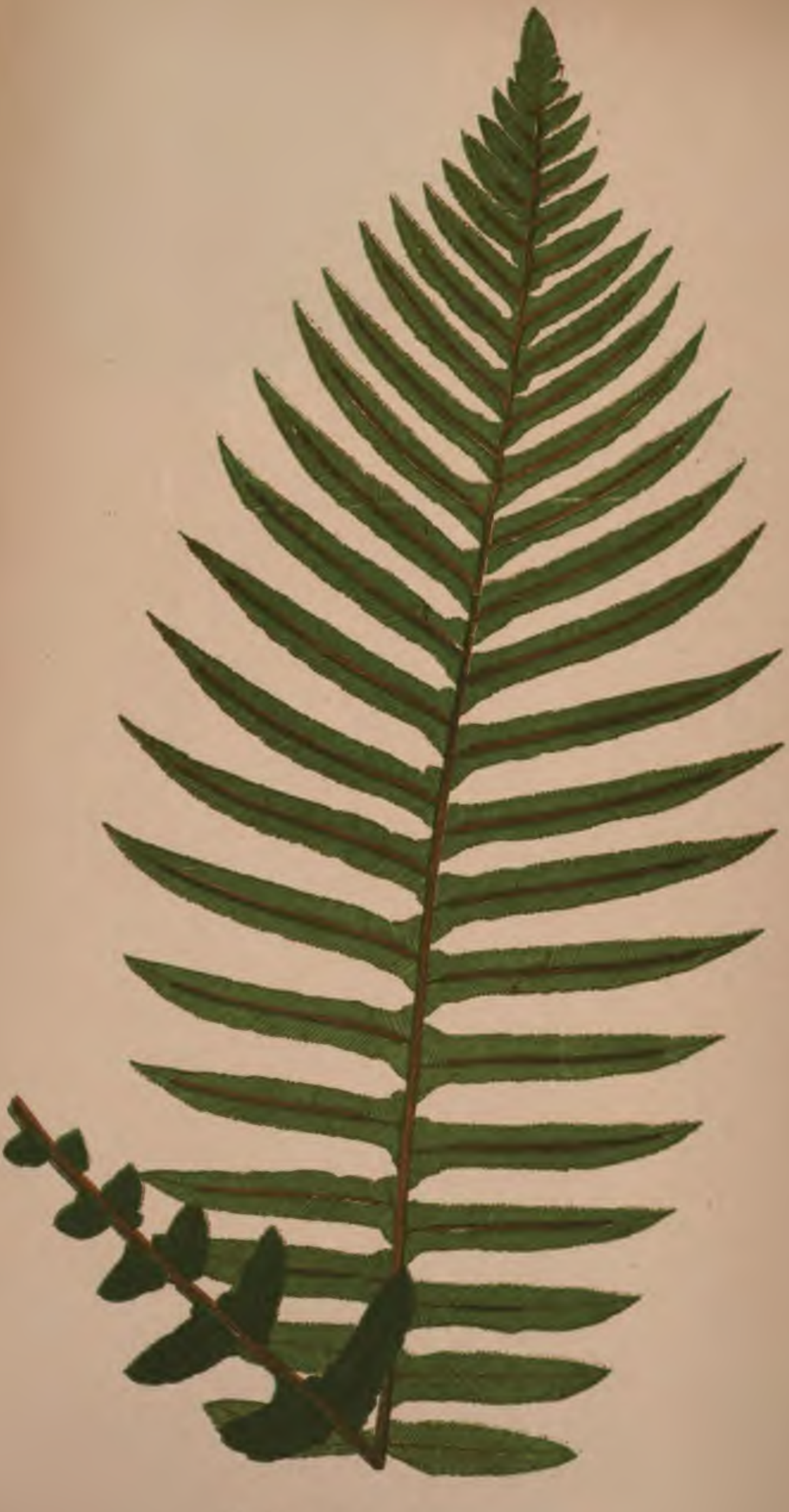
Length of frond six or eight inches; colour pale green.

A very distinct species.

For fronds my thanks are due to M. Schott, of the Imperial Gardens of Schonbrünn; and to Sir W. J. Hooker, of the Royal Gardens, Kew.

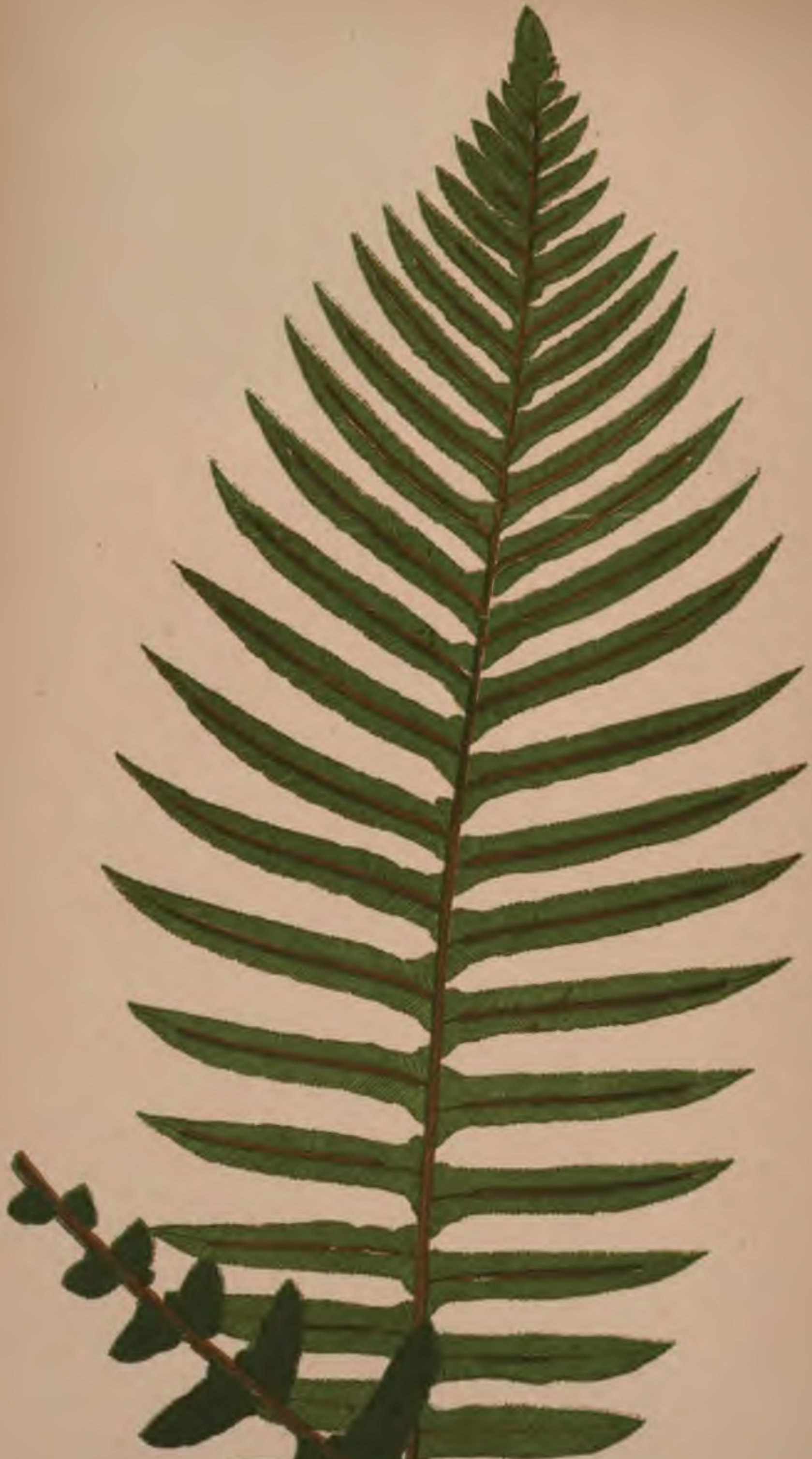
It is in the Catalogues of Messrs. Sim, of Foot's Cray; Veitch, of Chelsea; E. G. Henderson, of St. John's Wood; A. Henderson, of Pine-apple Place; Booth, of Hamburg; and Stansfield, of Todmorden.

The illustration is from a frond forwarded by Sir William Hooker.



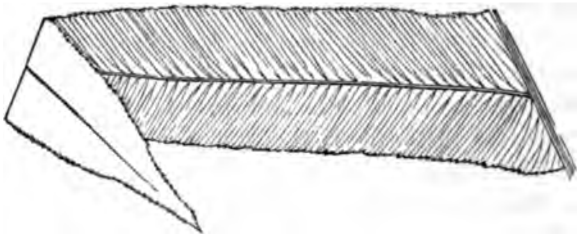
BLECHNUM BRASILIENSE.

XXXVIII.—VOL. 4.



BLECHNUM BRASILIENSE.

XXXVIII—Vol. 4.



Pinna of barren Frond—under side.

BLECHNUM BRASILIENSE.

DESVAUX. J. SMITH. KAULFUSS. PRESL. FEE. SCHOTT. LINK.

PLATE XXXVIII. VOL. IV.

Blechnum brasiliense,	MOORE AND HOULSTON.
“ *fluminense,*	ARRABIDA.
“ *corcovadense,*	RADDI.
“ *campestre,*	OF GARDENS.
“ *nitidum,*	PRESL.

Blechnum—From *Blechnon,* the Greek name for a Fern.
Brasiliense—Brazilian.

A HANDSOME, large-growing, evergreen stove Fern.

Native of Brazil.

Raised from spores in the Royal Gardens, Kew, in 1834.

The fronds, which are lanceolate in form, are pinnate, the pinnæ being adnate, decurrent, rigid, repand, linear-lanceolate, undulated, and with a spinulose-serrate edge, oblique, and about eight inches in length.

Stipes scaly, and two or three inches in length.

Sori continuous.

Veins forked.

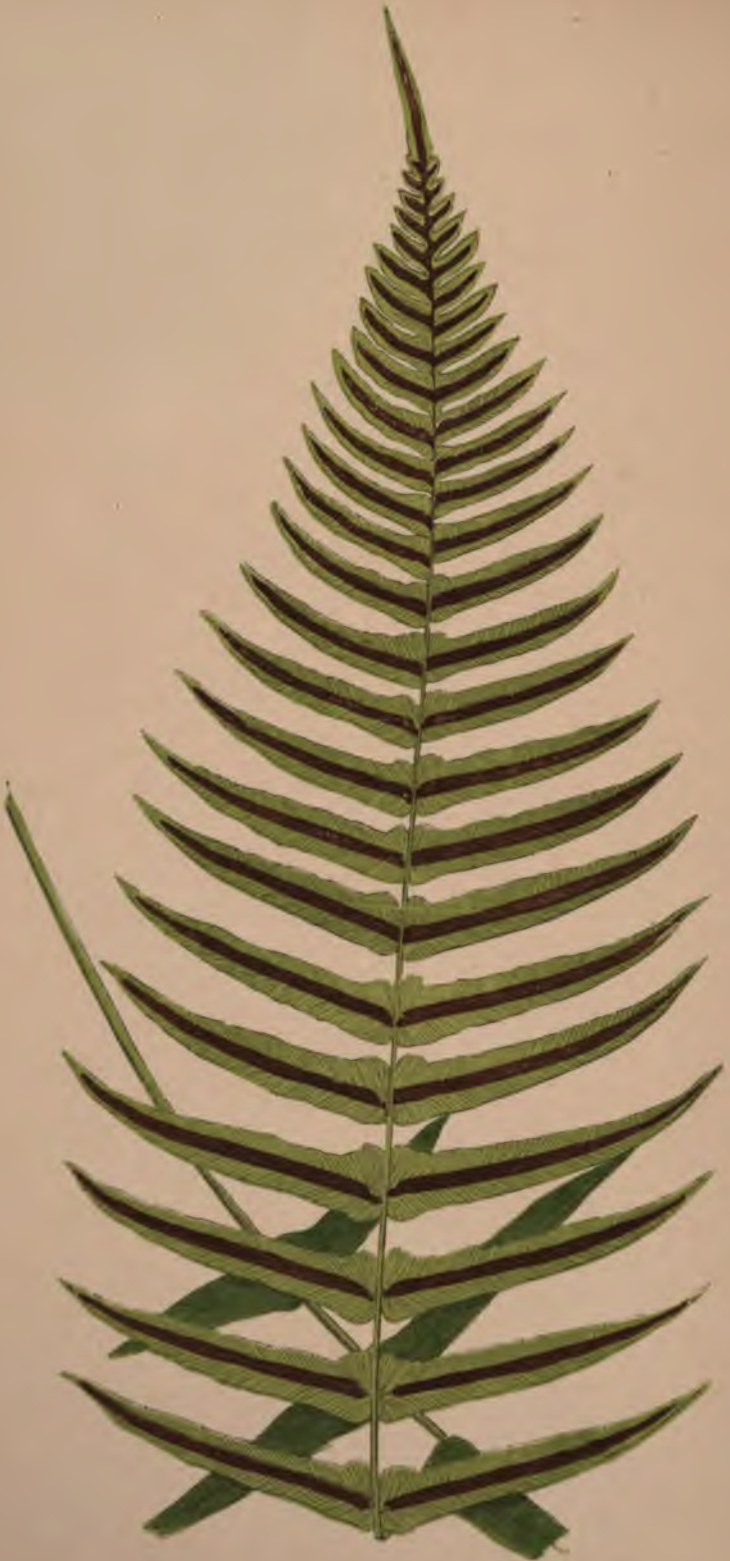
Fronds terminal, rising from an erect caudex, which attains the height of two or three feet.

Length of frond from fifty to sixty inches; colour deep green.

For plants my thanks are due to Mr. Stratton, Curator of the Cambridge Botanic Gardens; Messrs. E. G. Henderson, Nurserymen, St. John's Wood; and to Mr. Dryden, gardener to Mr. Evans, of Allestre Hall; and for fronds to Mr. G. Norman, of Hull, and Mr. Joseph Henderson, of Wentworth.

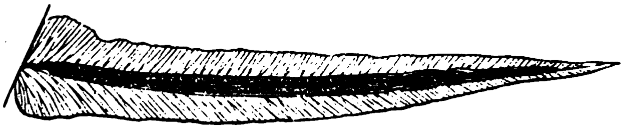
It is in the Catalogues of Messrs. Sim, of Foot's Cray; Veitch, of Chelsea; E. G. Henderson, of St. John's Wood; A. Henderson, of Pine-apple Place; Booth, of Hamburg; Kennedy, of Covent Garden; Stansfield, of Todmorden; and Cooling, of Derby.

The illustration is from a frond sent by Mr. G. Norman, of Hull.



BLECHNUM OCCIDENTALE.

XXXIX.—VOL. 4



Pinna of fertile Frond—under side.

BLECHNUM OCCIDENTALE.

LINNÆUS. PLUMIER. JACQUIN. HOOKER.
J. SMITH. MOORE AND HOULSTON. CAVANILLES.
LEIBMANN. MARTENS AND GALLEOTTI. KUNZE. PRESL.
FEE. LAMARCK. SPRENGEL. RADDI.
SCHOTT. LINK.

PLATE XXXIX. VOL. IV.

Blechnum lonchitis,	PLUMIER.
" *filix-minor,*	SLOAN.
" *caudatum,*	CAVANILLES. KUNZE.
" "	MARTENS AND GALLEOTTI.
" *suburbicum,*	ARRABIDA.

Blechnum—From *Blechnon,* the Greek name for a Fern.
Occidentale—Western.

AN evergreen stove Fern.

Native of Mexico, Jalapa, and Tropical America.

A common species, easily cultivated, and propagating readily from spores.

Fronds pinnate, lanceolate in form, the pinnæ being sub-sessile, falcate, and sub-cordate-lanceolate. Lower pinnæ remote, the terminal one entire and caudate, acute, margin dentate.

The rachis glanduloso-pubescent.

Stipes near the base scaly.

Fronds terminal, and adherent to a creeping rhizoma.

Veins forked.

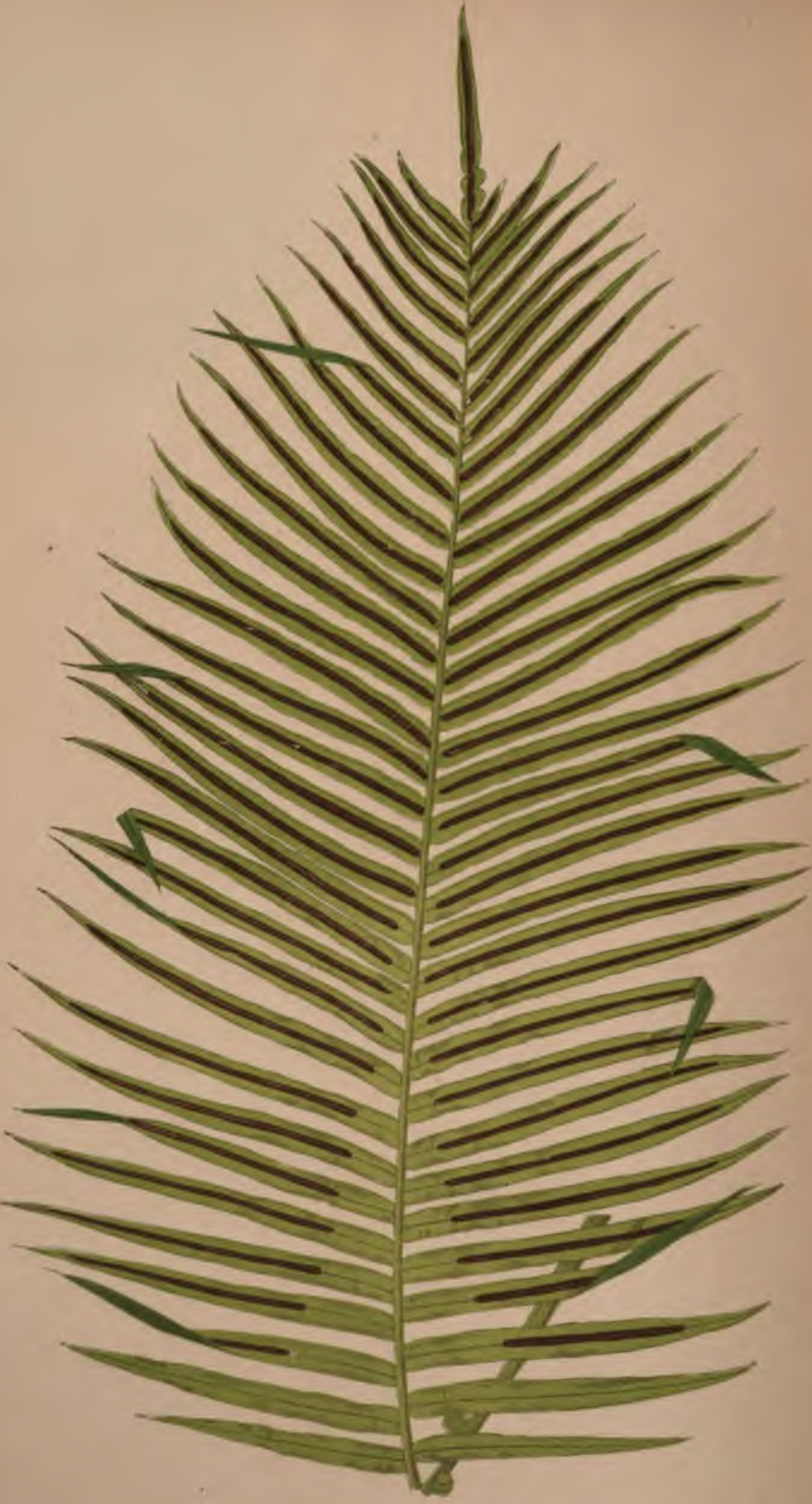
Sori linear.

Length of frond from twelve to twenty-four inches; colour bright green.

For plants my thanks are due to Sir Oswald Mosley, Bart., of Rolleston Hall; Mr. Lamb, gardener to Mr. F. Wright, of Osmaston Manor; and to Mr. Joseph Henderson, of Wentworth; for fronds to Mr. Joseph Henderson, of Wentworth; Mr. G. Norman, of Hull; Mr. J. Smith, of Kew; and M. Schott, of the Imperial Gardens of Schonbrünn.

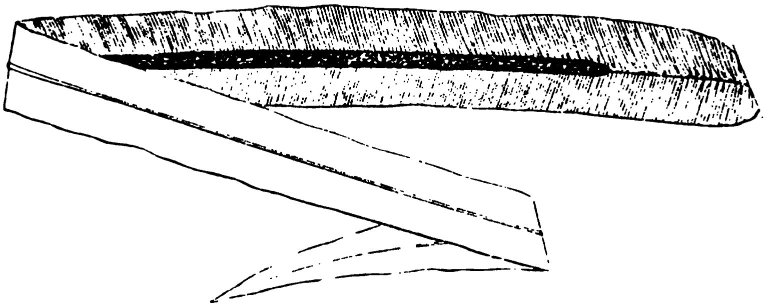
It may be procured of any Nurseryman.

The illustration is from a plant in my own collection.



BLECHNUM ORIENTALE.

XI.—VOL. 4.



Pinna of fertile Frond—under side.

BLECHNUM ORIENTALE.

LINNÆUS. SCHKUHR. J. SMITH. KUNZE. SCHOTT.
PRESL, (*Not of* WALLICH.) SPRENGEL.

PLATE XL. VOL. IV.

Blechnum—From *Blechnon*, the Greek name for a Fern.
Orientale—Eastern.

AN interesting evergreen stove species.

Native of India, Java, and China.

Fronds pinnate, the pinnæ being alternate, adherent, entire, linear, sessile, unequally cuneate at the base, and attenuated towards the apex.

Veins thickened, forming a cartilaginous margin.

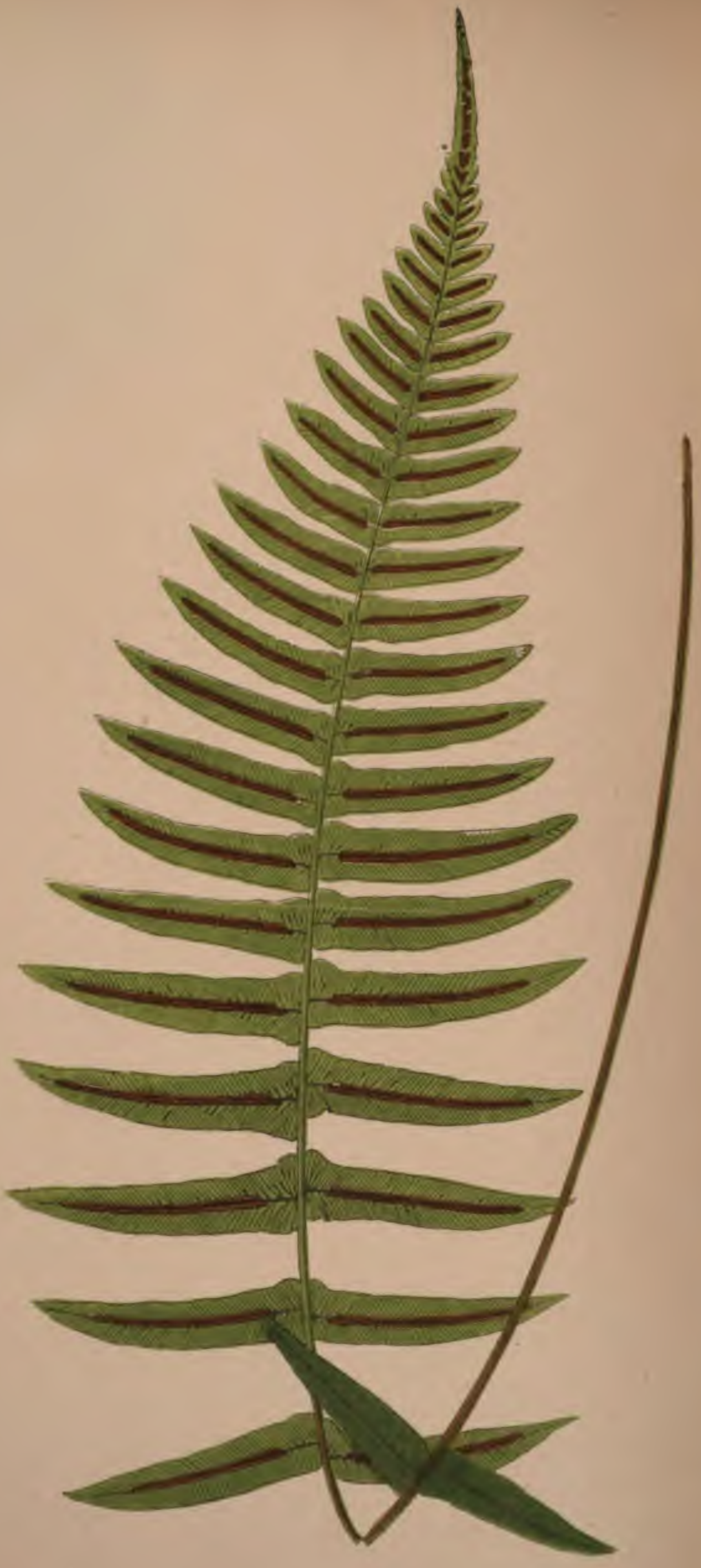
Rachis glabrous.

Length of frond from twenty to thirty inches; colour pale green.

For fronds of this Fern my thanks are due to Sir W. J. Hooker, of the Royal Gardens, Kew; and to M. Schott, of the Imperial Gardens of Schonbrünn.

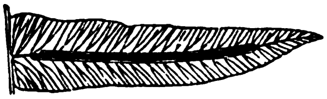
It is in the Catalogue of Mr. E. G. Henderson, of St. John's Wood.

The illustration is from Sir William Hooker's frond.



BLECHNUM GLANDULOSUM.

XLI—VOL. 1.



Pinna of fertile Frond—under side.

BLECHNUM GLANDULOSUM.

LINK. KAULFUSS. J. SMITH. (*Not* KUNZE.)
MOORE AND HOULSTON. LEIBMANN. FEE.

PLATE XLI. VOL. IV.

Blechnum pohlianum, PRESL.

Blechnum—From *Blechnon,* the Greek name for a Fern.
Glandulosum—Glanded.

AN interesting, erect-growing, evergreen stove Fern.

Native of Brazil and Mexico.

Raised from spores in the Royal Gardens, Kew, in 1838.

The fronds, which are lanceolate in form, are minutely pubescent and pectinate-pinnatifid; segments linear-lanceolate, acute, somewhat falcate, and rather membranous.

Base of the stipes scaly.

Sori linear.

Veins forked.

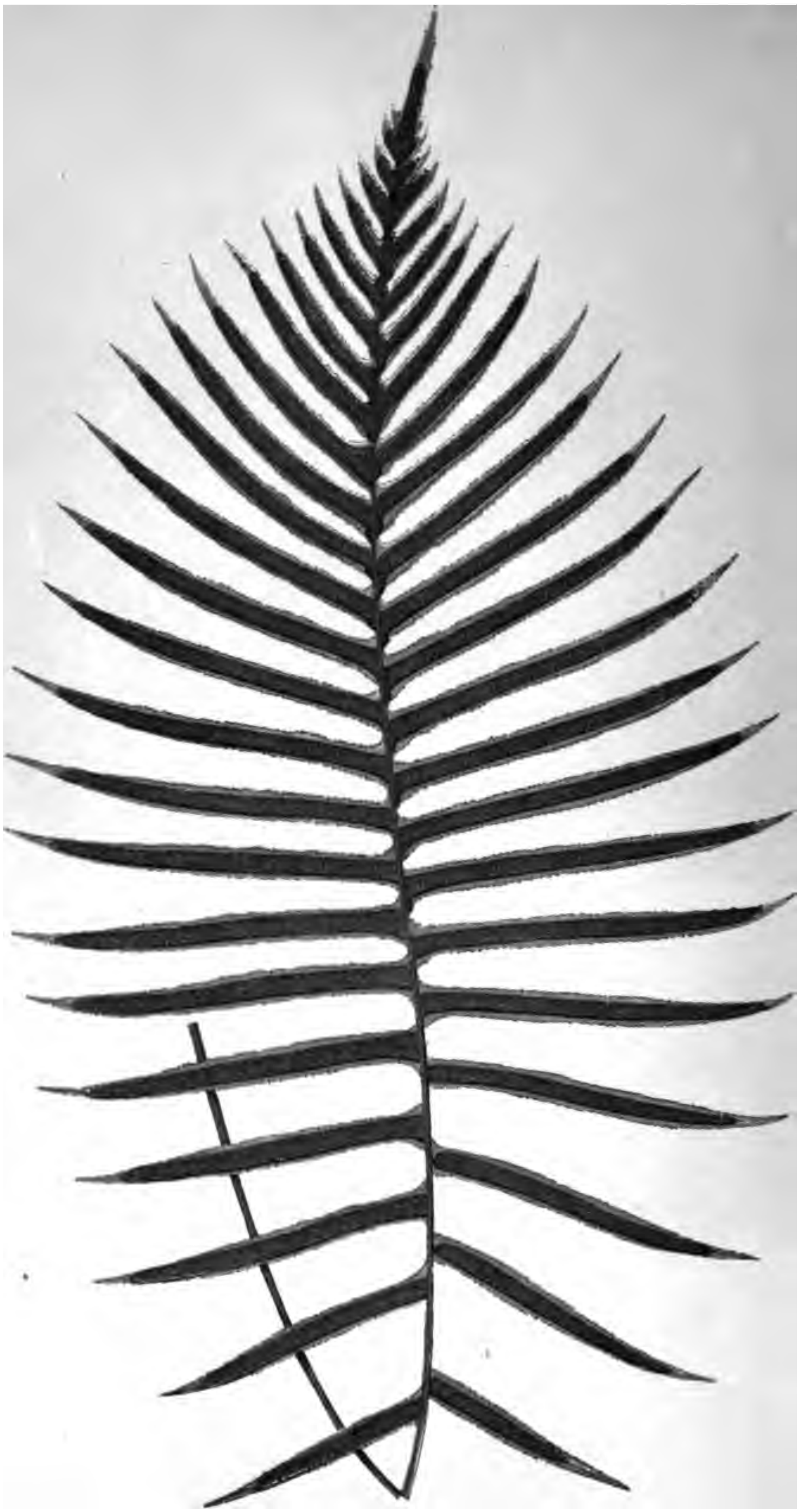
Fronds terminal, and adherent to a creeping rhizoma.

Length of frond from twelve to eighteen inches; colour pale green.

For a frond of this species my thanks are due to Sir W. J. Hooker, Director of the Royal Gardens, Kew.

This species may be procured of Messrs. Sim, of Foot's Cray; E. G. Henderson, of St. John's Wood; Booth, of Hamburg; and Kennedy, of Covent Garden.

The illustration is from Sir W. J. Hooker's frond.



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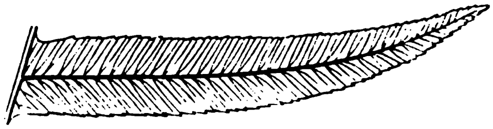


Pinna of barren Frond—under side.

BLECHNUM CARTILAGINEUM.

SWARTZ. METTEN. SMITH. MOORE AND HOULSTON. KUNZE. PRESL. FEE.

PLATE XLII. VOL. IV.

Blechnum—From *Blechnon*, the Greek name for a Fern.
Cartilagineum—Cartilaginous.

A HANDSOME large-growing Fern.

An evergreen stove or warm greenhouse species.

Native of New South Wales.

The fronds are pinnate and broadly lanceolate in form; the pinnæ sessile, with the base dilated, linear-lanceolate in shape, oblique, and undulate. Margin spinulose serrate, with a mucronate apex. Length of pinnæ eight inches.

Stipes densely scaly, the scales dark and narrow; muricated, and about six inches in length.

Sori linear.

Fronds terminal, and adherent to a thick creeping rhizoma.

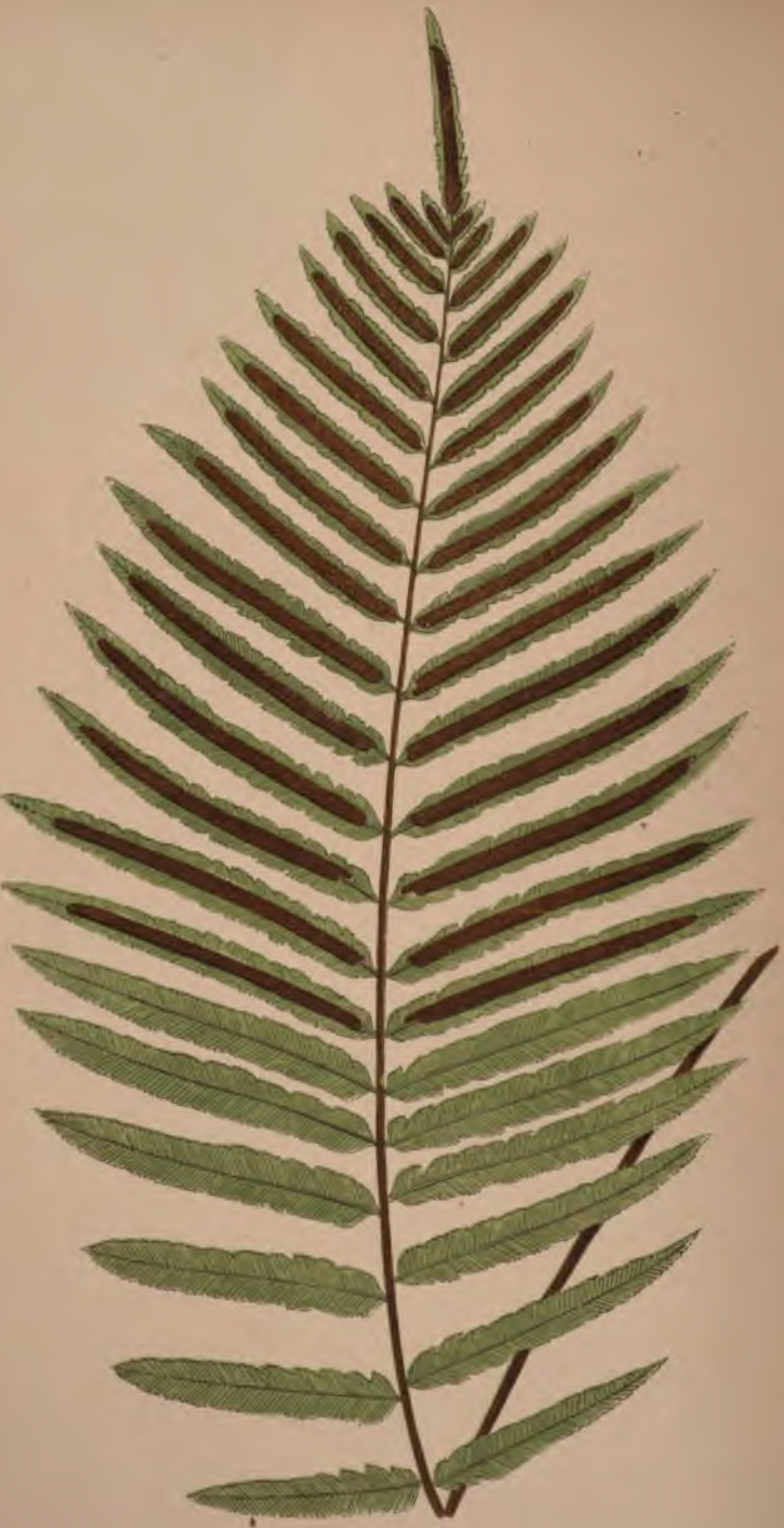
Length of frond from thirty-five to forty inches; colour light green.

For a plant of this Fern my thanks are due to Mr. Ingram, of Belvoir Castle; and for fronds to Sir W. J. Hooker, of the Royal Gardens, Kew, and to Mr. Joseph Henderson, of Wentworth.

Blechnum cartilagineum does not appear in any of the Nurserymen's Catalogues.

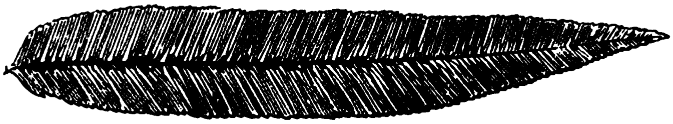
The illustration is from a frond forwarded by Sir William Hooker.

IOTHECA·BODLEI·NA



BLECHNUM SERRULATUM.

XLIII—VOL. 4.



Pinna of barren Frond—under side.

BLECHNUM SERRULATUM.

RICHARD. SCHKUHR. SMITH. MOORE AND HOULSTON.
KUNZE. PRESL. *(Not of* MICHAUX.) FEE.

PLATE XLIII. VOL. IV.

Blechnum angustifolium,	WILLDENOW.
" *calophyllum,*	LANGSDORFF AND FISCHER.
" "	LINK.
" *striatum,*	R. BROWN.
" *stagninum,*	RADDI.

Blechnum—From *Blechnon,* the Greek name for a Fern.
Serrulatum—Saw-edged.

AN evergreen stove species, well worthy of cultivation.

Native of Brazil and Guiana.

Received into the Royal Gardens, Kew, in 1841, from Mr. D. Cameron.

The fronds, which are handsome, are glabrous and pinnate; the pinnæ lanceolate and petiolate; base obliquely-truncate, having a cartilaginous serrated edge, somewhat membranous, and articulate with the rachis. Slightly scaly on the costa.

Fronds terminal, and adherent to an elongated creeping rhizoma.

Veins forked.

Sori linear.

Length twenty-four inches; colour bright green.

For a plant of *Blechnum serrulatum* I am indebted to Messrs. Veitch, of Chelsea; and for fronds to Sir W. J. Hooker, Director of the Royal Gardens, Kew.

It may be procured of Messrs. Veitch, of Chelsea, and Booth, of Hamburg.

The illustration is from Sir W. J. Hooker's frond.

GENUS XI.

WOODWARDIA. Swartz.

A SMALL and very dissimilar-looking family, with pinnate fronds. Veins reticulated, becoming free near the margin. Sori oblong, or linear-elongated, uniserial, and immersed, formed upon the transverse costal venules. Indusium revolute and vaulted. Rhizoma creeping.

Fronds from twelve to seventy inches in length.

This genus is named after Mr. Woodward, an English botanist.

There is no British representative.

Presl, in his "Tentamen Pteridographiæ," enumerates the following:—

1.—Woodwardia radicans, *Swartz*. (Woodwardia biserrata, *Presl.*)
2.—Woodwardia stans, *Swartz*.
3.— " angustifolia, *Smith*. (Woodwardia onocleoides, *Willdenow.*)
4.—Woodwardia thelypteroides, *Pursh*.

Mr. Smith, in his Catalogue of the Ferns grown at Kew, the following:—

1.—Woodwardia radicans, *Swartz*.
2.—Anchistea virginica, *Presl*.
3.—Lorinsoria areolata, *Presl*.

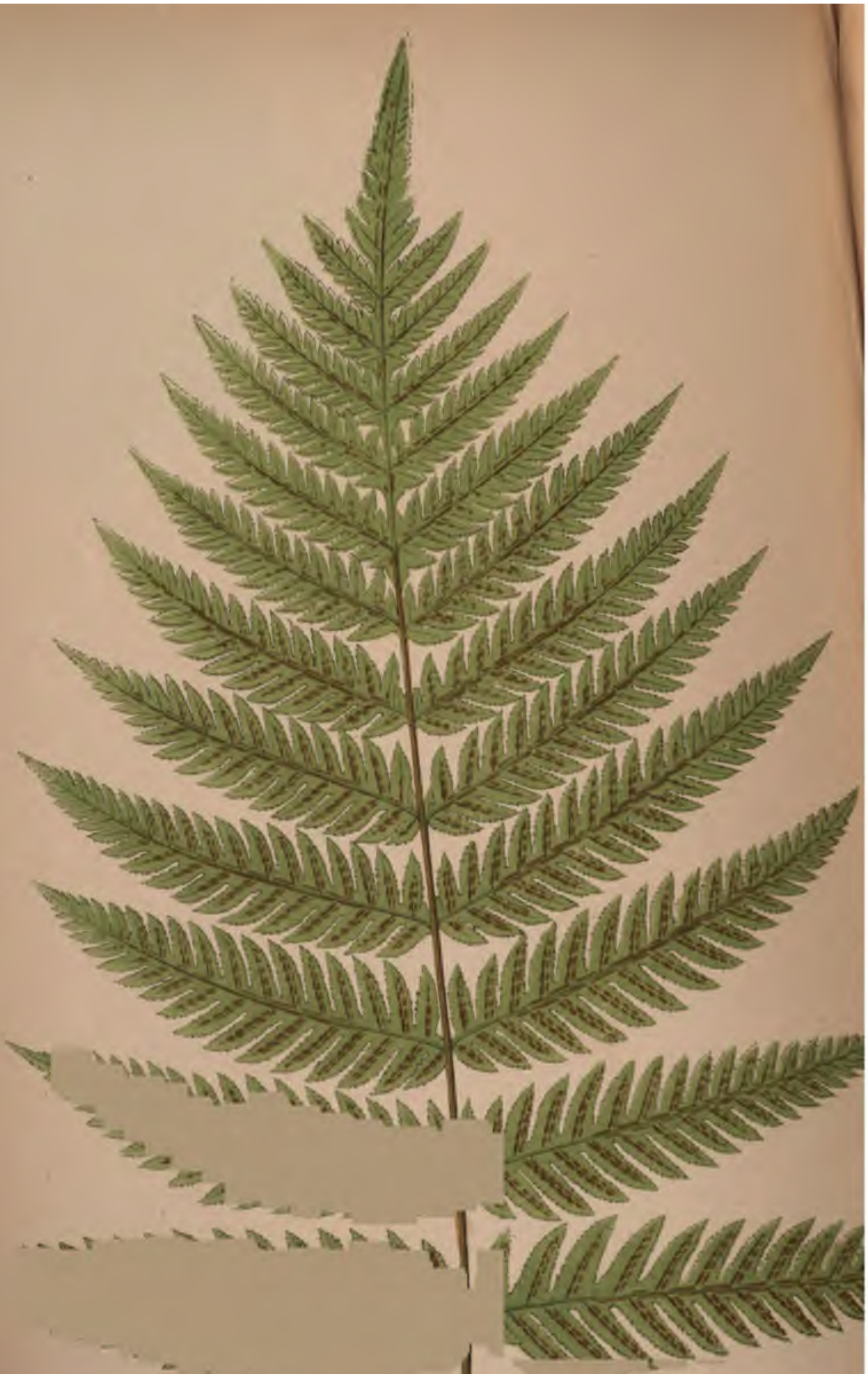
Kunze, in his "Index Filicum," the following:—

1.—Woodwardia angustifolia, *Smith*.
2.— " japonica, *Swartz*.
3.— " radicans, *Swartz*.
4.— " virginica, *Swartz*.

Fee, in his "Genres de la Famille des Polypodiacèes," the following:—

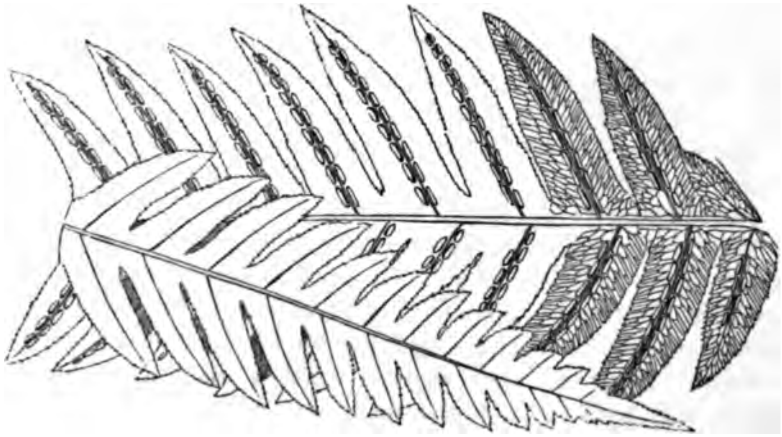
1.—Woodwardia radicans, *Swartz*.
2.— " japonica, *Swartz*.

3.—Woodwardia caudata, *R. Brown.*
4.— " dives, *Fee.*
5.— " lunulata, *R. Brown.*
6.— " aspera, *Fee.*
7.— " kunthiana, *Fee.*
8.— " connexa, *Fee.*
9.— " blechnoides, *Cunningham.*
10.— " media, *R. Brown.*
11.— " virginica, *Swartz.*
12.—Lorinsoria areolata, *Presl.*
13.— " thelypteroides, *Fee.*



WOODWARDIA RADICANS.

XLIV—VOL. 1.



Portion of mature Frond.

WOODWARDIA RADICANS.

SWARTZ. SCHKUHR. HOOKER. J. SMITH. KUNZE. LINK.
SCHOTT. MOORE AND HOULSTON.
WILLDENOW. KAULFUSS. PRESL. SCHLECHTENDAL. NEES.
LIEBMANN. FEE.

PLATE XLIV. VOL. IV.

Woodwardia stans,	SWARTZ. SCHKUHR.
" *spinulosa,*	MARTENS AND GALLEOTTI.
Blechnum radicans,	LINNÆUS.
Woodwardia biserrata,	PRESL.

Woodwardia—Named after Mr. T. J. Woodward, a British botanist.
Radicans—Rooting; in reference to the viviparous plants formed near the ends of the fronds.

An exceedingly interesting large-growing Fern.

An evergreen greenhouse species.

Native of Madeira, South of Europe, Teneriffe, Canary Islands, Nepal, California, Peru, North West America, Sicilia, and Mexico. Liebmann found it at an elevation of from four to eight thousand feet; Galleotti from nine to twelve thousand feet; and Dr. Schiede at Jalapa.

There is a variety called var. *mexicana*, of Fee, which is found in Mexico.

Introduced into the Royal Gardens in 1779.

The fronds, which are pinnate, have oblong-lanceolate pinnæ, about twelve inches in length, the basal ones standing forward, petiolate, profoundly pinnatifid, with somewhat lanceolate segments, repand, the margin spinulose-serrate, and the apex mucronate. Near the apex of each frond a plant is produced, which will grow to a considerable size whilst on the frond; indeed it is not at all uncommon to see plants with half a dozen fronds a foot long, receiving all their support from the parent leaf.

Length of frond from five to six feet; colour bright green.

Stipes densely scaly, the scales brown and very large.

Fronds terminal, rooting at the apex.

Rhizoma creeping.

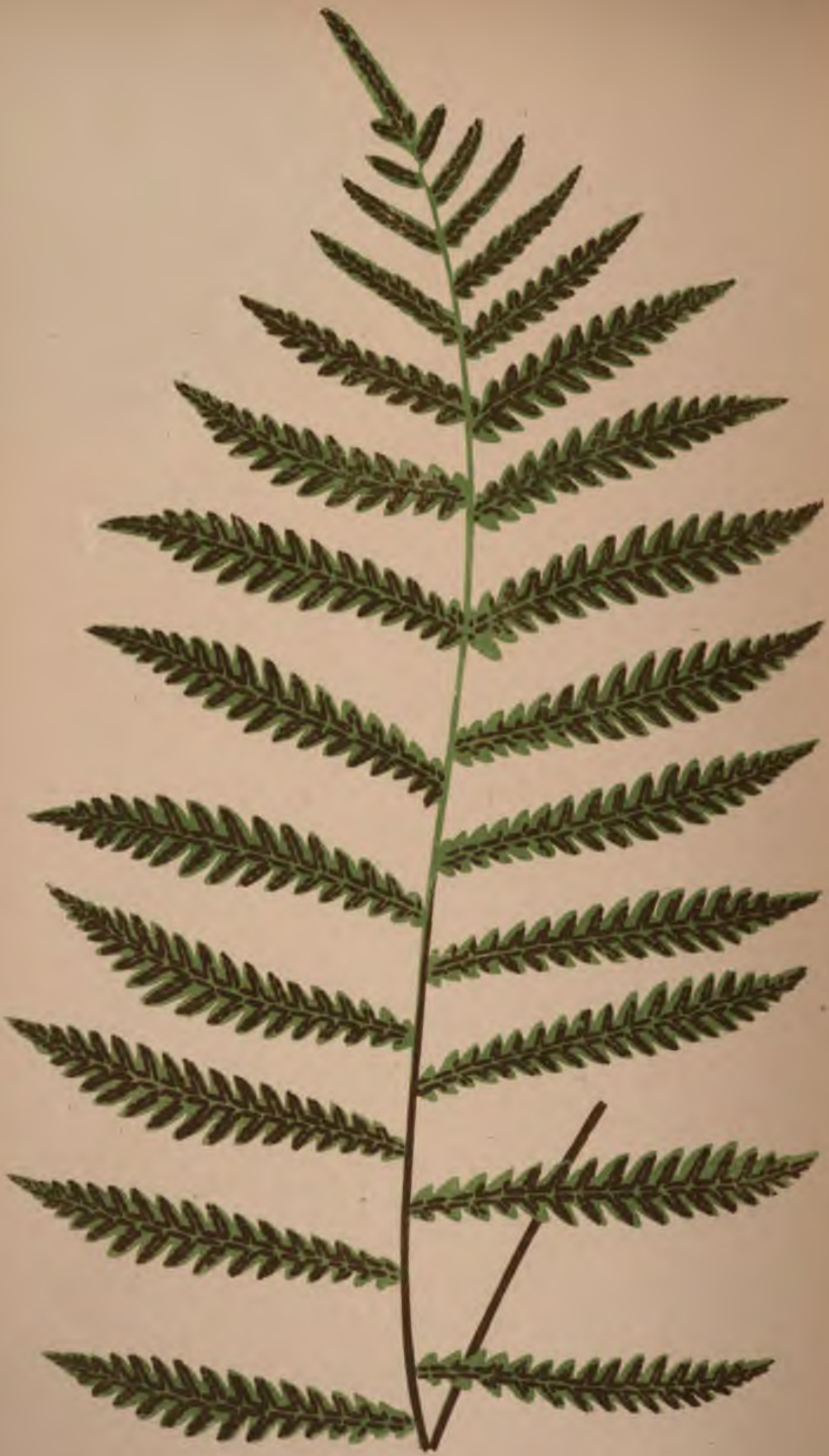
Veins reticulated, becoming free near the margin.

Sori uniserial and costal; indusium revolute, and of the same form as the sori.

For plants of this species my thanks are due to Mr. Clarke, of the Royal Botanic Gardens, Glasgow, and to Messrs. Veitch, of Chelsea; and for fronds to the same gentlemen, and to Mr. Norman, of Hull; M. Schott, of the Imperial Gardens of Schonbrünn; and to Messrs. Booth, of Hamburg.

It is in the Catalogues of Messrs. Veitch, of Chelsea; E. G. Henderson, of St. John's Wood; Booth, of Hamburg; Rollisson, of Tooting; A. Henderson, of Pine-apple Place; Sim, of Foot's Cray; Kennedy, of Covent Garden; Stansfield, of Todmorden; Young, of Taunton; and Cooling, of Derby.

The illustration is from a plant in my own collection.



WOODWARDIA VIRGINICA.

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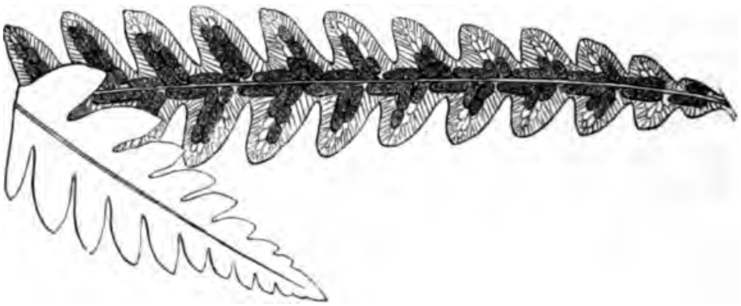


Pinna of fertile Frond—under side.

WOODWARDIA VIRGINICA.

Swartz. Kunze. Link. J. Smith. Fee. Sprengel.
Moore and Houlston.

PLATE XLV. VOL. IV.

Blechnum serrulatum,	Michaux. Sprengel.
" *virginicum,*	Linnæus.
" *carolinianum,*	Walt.
Anchistea virginica,	Presl.
Doodia virginica,	Presl.
Woodwardia banisteriana,	Michaux.

Woodwardia—Named after Mr. T. J. Woodward, a British botanist. *Virginica*—Virginian.

In the Section Anchistea of Authors.

A pleasing, hardy, deciduous Fern.
Native of North America, Virginia, and Carolina.

Cultivated in the Royal Gardens, Kew, in 1834.

Fronds glabrous, pinnate, and ovate-lanceolate in form; pinnæ lanceolate, pinnatifid, petiolulate, and articulate with the rachis, the segments being oblong-ovate, somewhat obtuse, and having an entire margin. Fronds lateral.

Rhizoma creeping.

Veins reticulated, except the margin, where free.

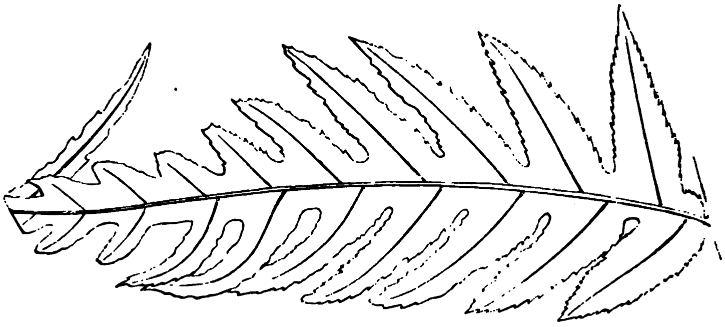
Sori uniserial.

Length of frond from eighteen to twenty-four inches; colour pale green.

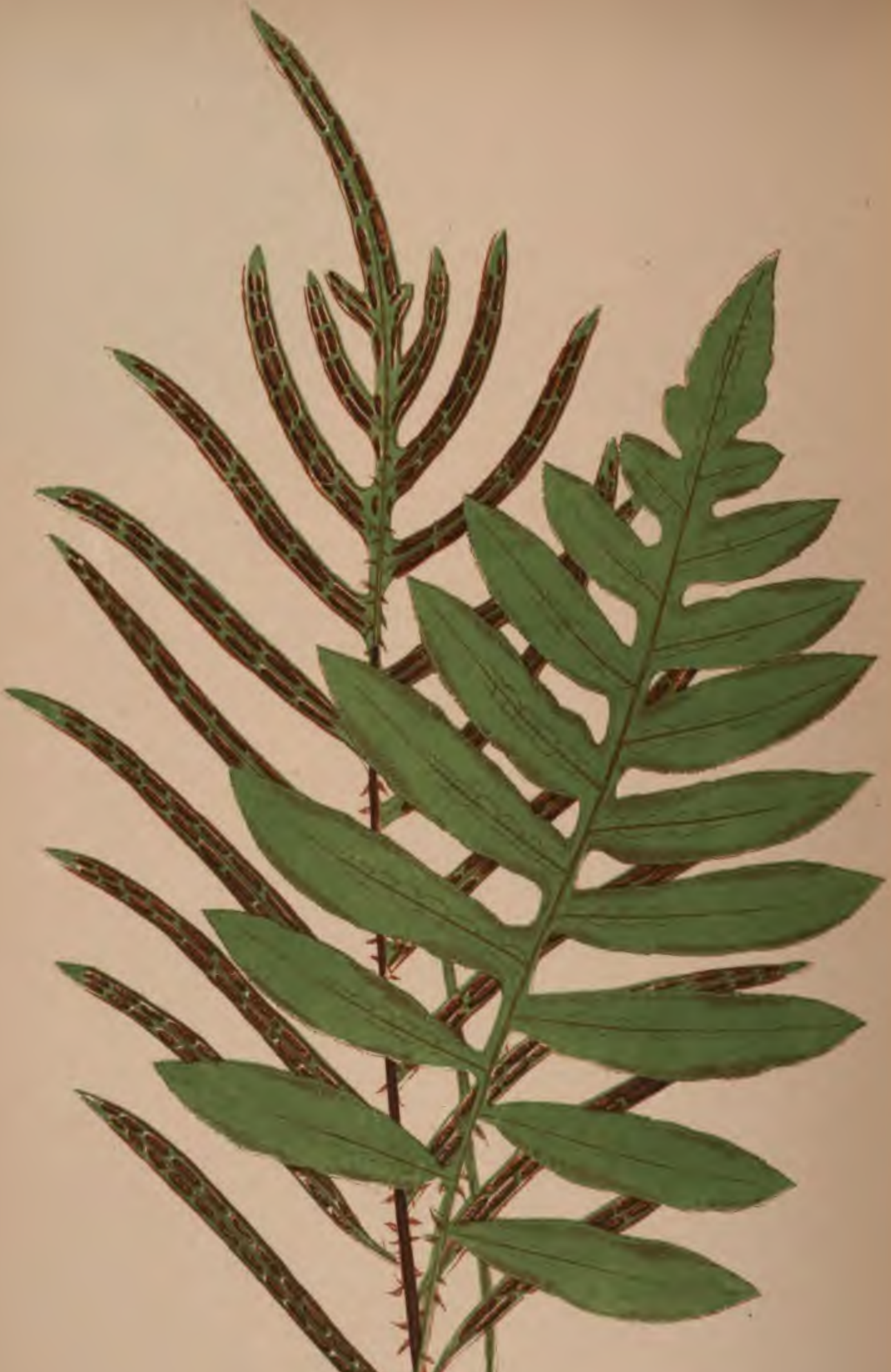
For a plant and fronds of this species my thanks are due to Mr. Joseph Henderson, of Wentworth.

This species may be procured of Messrs. Rollisson, of Tooting.

The illustration is from a frond forwarded by Mr. Joseph Henderson, of Wentworth.

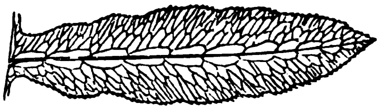


WOODWARDIA RADICANS.—Pinna of barren Frond.



WOODWARDIA AREOLATA.

XLVI—VOL. 4.



Pinna of barren Frond—under side.

WOODWARDIA AREOLATA.

Lowe.

PLATE XLVI. VOL. IV.

Lorinsoria areolata,	Presl. Fee.
Acrostichum areolatum,	Linnæus.
Woodwardia angustifolia,	Smith. Kunze. Linnæus.
" "	Presl. Sprengel.
" *onocleoides,*	Willdenow. Link. J. Smith.
" "	Morison. Plukenet. Fee.
" "	Schkuhr. Moore & Houlston.
" *floridana,*	Schkuhr.
Onoclea nodulosa,	Michaux. Swartz.
Osmunda caroliniana,	Walt.

Woodwardia—Named after Mr. T. J. Woodward, a British botanist.
Areolata—Areolate.

In the Section Lorinsoria of Authors.

A handsome, hardy, deciduous species.

Native of North America, New Jersey, and Florida.

Introduced into the Royal Gardens, Kew, in the year 1830, having been received from the Messrs. Loddiges.

The barren and fertile fronds different; sterile fronds glabrous and pinnatifid, segments ovate-lanceolate in form, with a serrated margin. The fertile fronds erect and pinnatifid, segments linear-acuminate and narrow. Fronds lateral.

Rhizoma creeping.

Veins reticulated, becoming free near the margin.

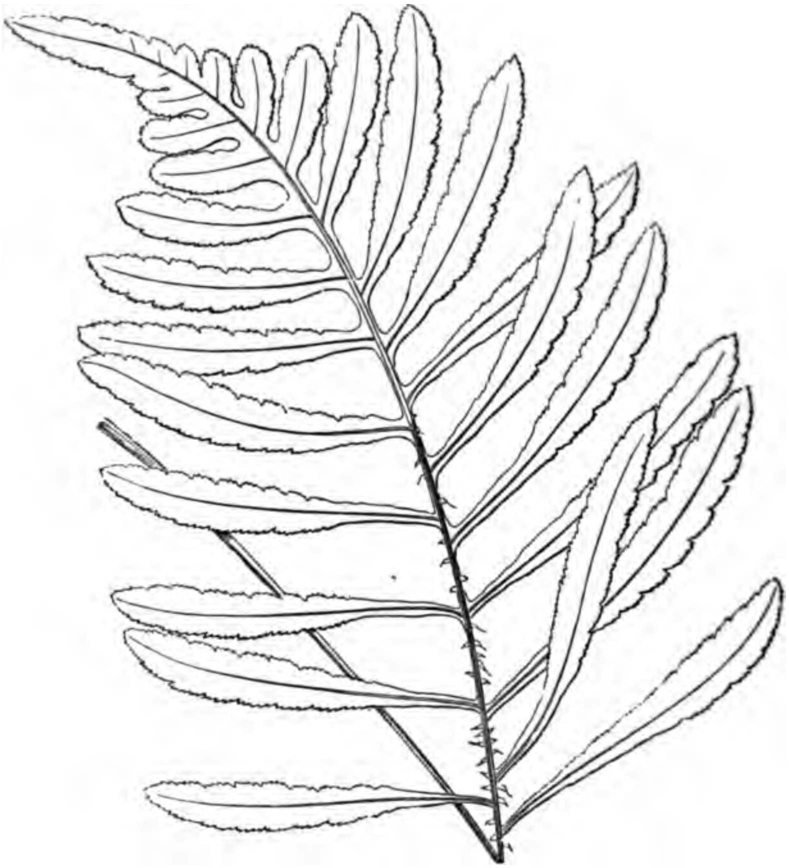
Sori uniserial.

Length of the sterile fronds about twelve inches, and of the fertile fronds fifteen inches; colour light green.

For a plant my thanks are due to Mr. Joseph Henderson, of Wentworth; and for fronds to the same gentleman, and to Mr. G. Norman, of Hull.

It may be procured of Messrs. Sim, of Foot's Cray; A. Henderson, of Pine-apple Place; and Cooling, of Derby.

The illustration is from a plant in my own collection.



Barren Frond.

GENUS XII.

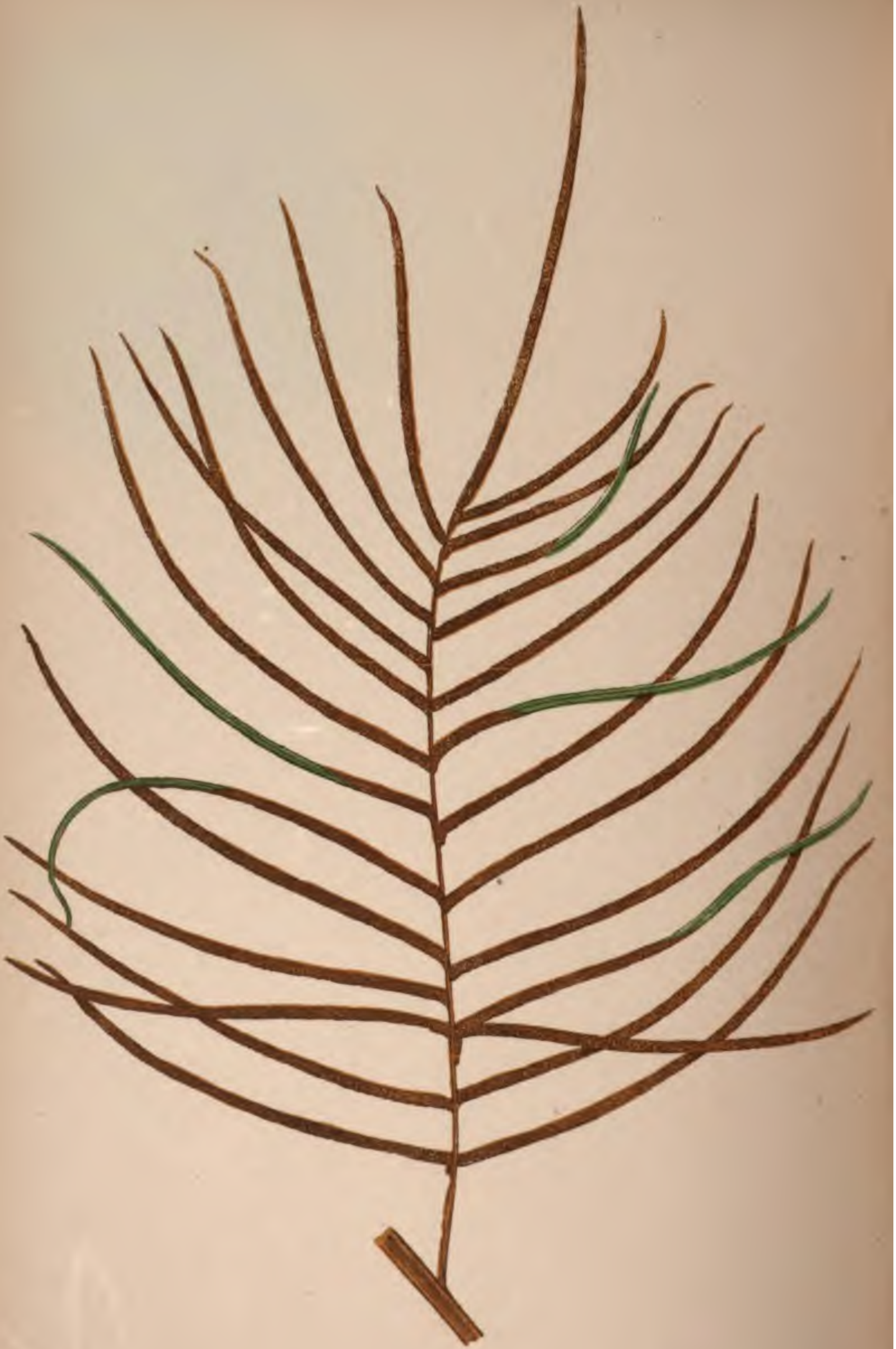
STENOCHLÆNA. J. SMITH.

STRONG-GROWING, creeping, or climbing Ferns from Africa, having fronds of two forms, the fertile ones being contracted.

The veins rising from an obscure transverse vein, continuous with, and approximate with the costa; venules direct, their apices clavate and united. Sori linear and continuous, and becoming confluent. Rhizoma scaly and creeping.

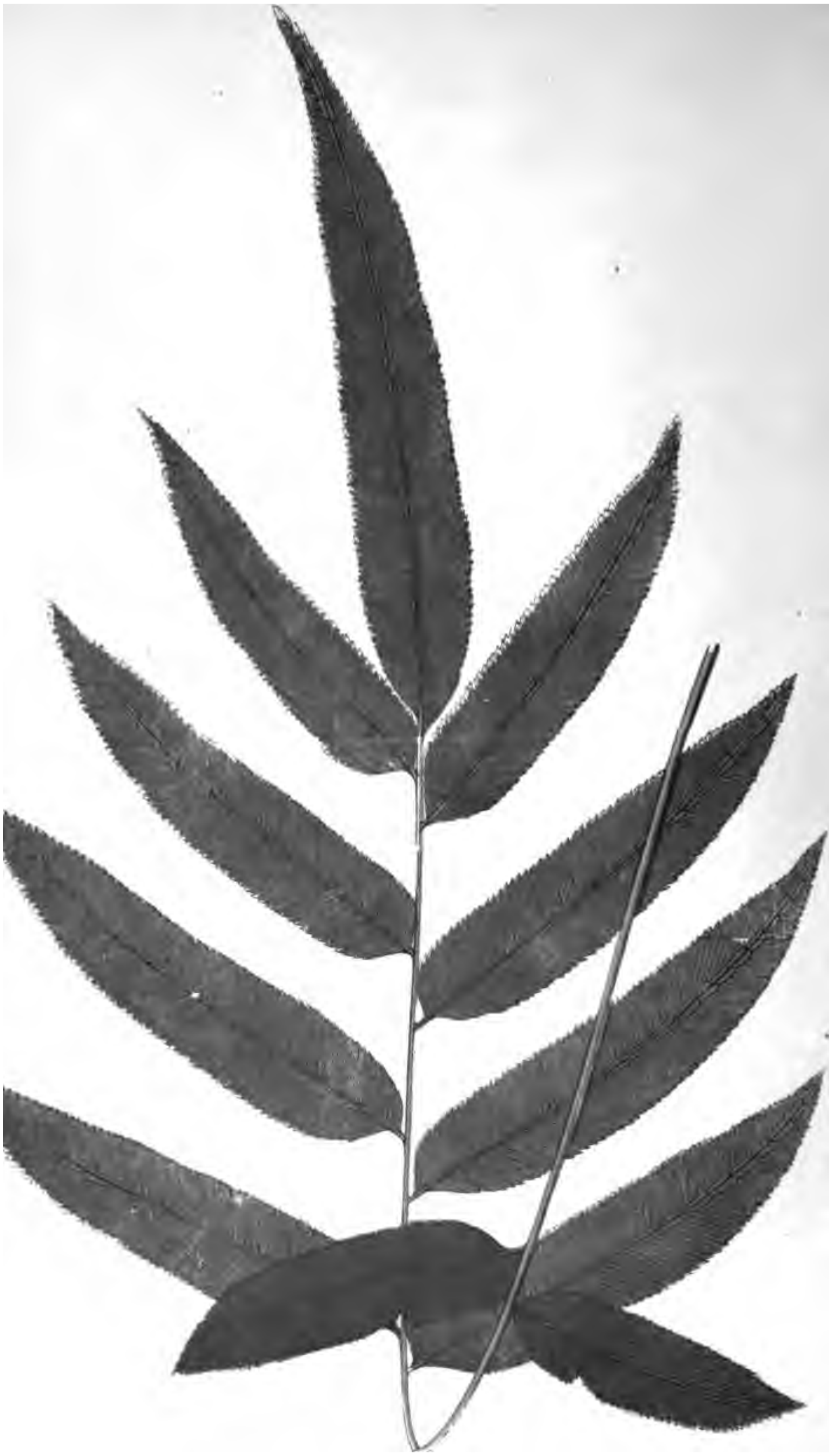
The name is derived from the Greek—a narrow cloak—on account of the narrow membranous margin of the fertile pinnæ.

There are no British examples.



STENOCHLÆNA MEYERIANA.

XLVII—Vol. 4.



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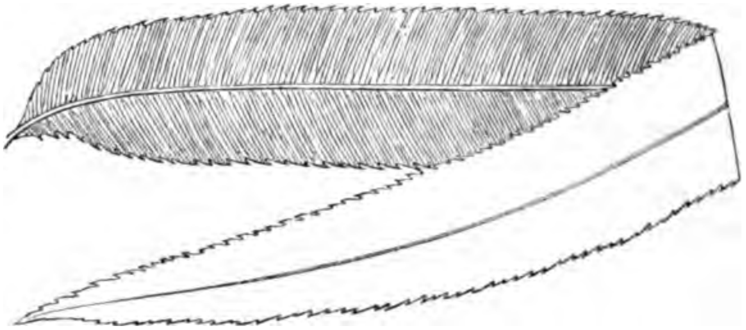


Pinna of barren Frond.

STENOCHLÆNA MEYERIANA.

J. Smith.

PLATES XLVII AND XLVIII. VOL. IV.

Lomaria meyeriana,	Kunze.
Lomariobotrys meyeriana,	Fee.
Stenochlæna tenuifolia,	Moore.
" *scandens,*	J. Smith. Kunze. Fee. Rheed.
" "	Burmann. Schkuhr. Hooker.
" "	Moore and Houlston.
Lomaria tenuifolia,	Desvaux.
Acrostichum scandens,	Linnæus.
Lomaria scandens,	Willdenow. Sprengel.
Olfersia scandens,	Presl.
Onoclea scandens,	Swartz.
Stenochlæna fraxinifolia,	Presl. Fee. (Var. of *scandens,* J. Smith. Cuming.)
" *laurifolia,*	Presl. Fee. (Var. of *scandens,* J. Smith.)

Stenochlæna—From *stenos,* narrow, and *chlaina,* a cloak, in reference to the covering of the spore-cases. *Meyeriana*—............?

A most interesting, free-growing, climbing Fern, which, to grow well, requires to be placed in a large pot, and trained up a piece of timber, as the creeping rhizoma will take root in the wood, and flourish much better under these conditions than when simply grown as a pot-plant. A straight branch of oak, six feet in length, and about eight inches in diameter, if secured in the pot in which the Fern is growing, is a convenient method of producing a good specimen.

An evergreen stove species.

Native of the East Indies and Malayan Islands.

Introduced into the Royal Gardens, Kew, in the year 1841, having been procured from the Royal Botanic Gardens of Berlin.

Mr. Moore, in his "Genera and Species of Cultivated Ferns," remarks, "that although cultivated as far back as 1840, he is not aware that it has produced any fructification except at Wentworth." Mr. Henderson, gardener to Earl Fitzwilliam, has kindly supplied me with the fertile portion of a frond, which is figured in this work. I have myself a large healthy plant, yet it has shewn no signs of bearing fertile fronds.

Fronds of two kinds. The sterile frond, which is glabrous and shining, is pinnate, the pinnæ being linear-acuminate, somewhat membranous, with a serrated cartilaginous margin, wedge-shaped at the base, and about twelve inches in length.

Fronds usually pendulous.

Veins simple or forked, and parallel, being joined together at the base by arcuate costal veins, which form a row of long narrow areoles close to the midrib.

Fertile fronds bipinnate, the pinnæ being from six to eight inches in length. The pinnules linear, narrow, and sporangiferous on their under surface.

Rhizoma slender, green, creeping, and covered with long narrow scales.

Fronds lateral.

Length from thirty-five to fifty inches; colour brilliant green.

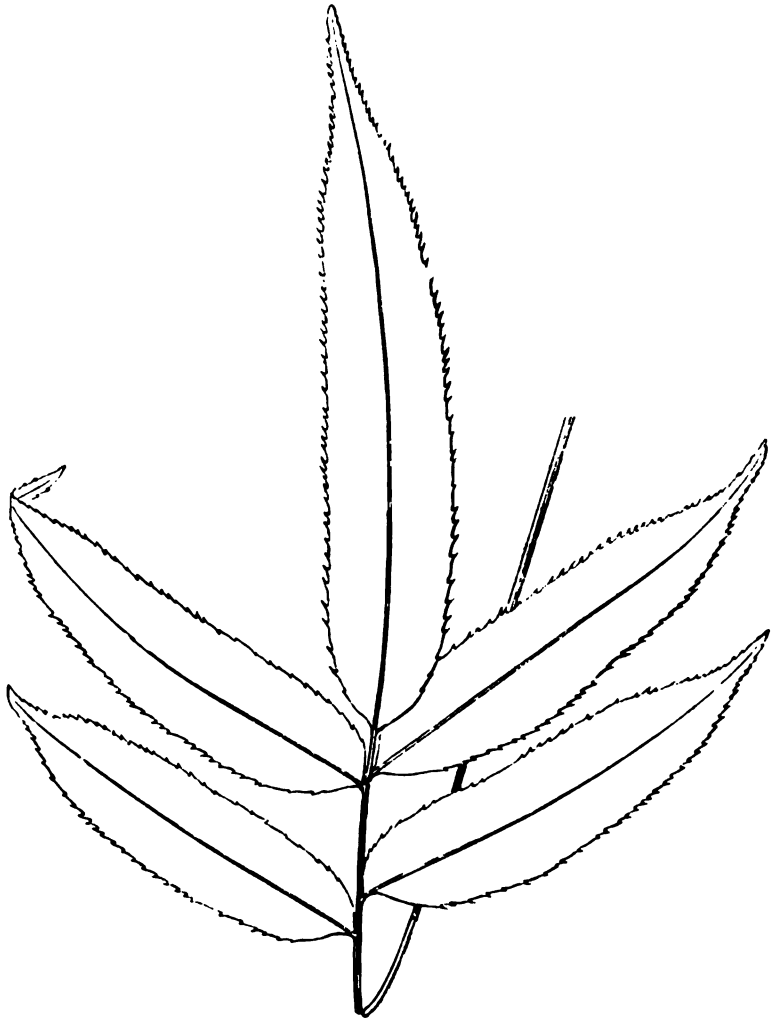
The wood-cut illustration at the foot of this page seems to be a distinct species, but I have only seen a small barren frond. It is the *Stenochlæna tenuifolia* of Moore.

My obligations are due to Mr. Stratton, of the Cambridge Botanic Gardens, for a plant of this Fern; and to Messrs.

Henderson, of Wentworth; Mr. Norman, of Hull; Mr. Sim, of Foot's Cray; and to Mr. Smith, of Kew, for fronds.

It is in the Catalogues of Messrs. Veitch, of Chelsea; Booth, of Hamburg; A. Henderson, of Pine-apple Place; Sim, of Foot's Cray; Kennedy, of Covent Garden; and Cooling, of Derby.

The illustrations are from fronds sent by Mr. Joseph Henderson, of Wentworth.



Stenochlæna tenuifolia.

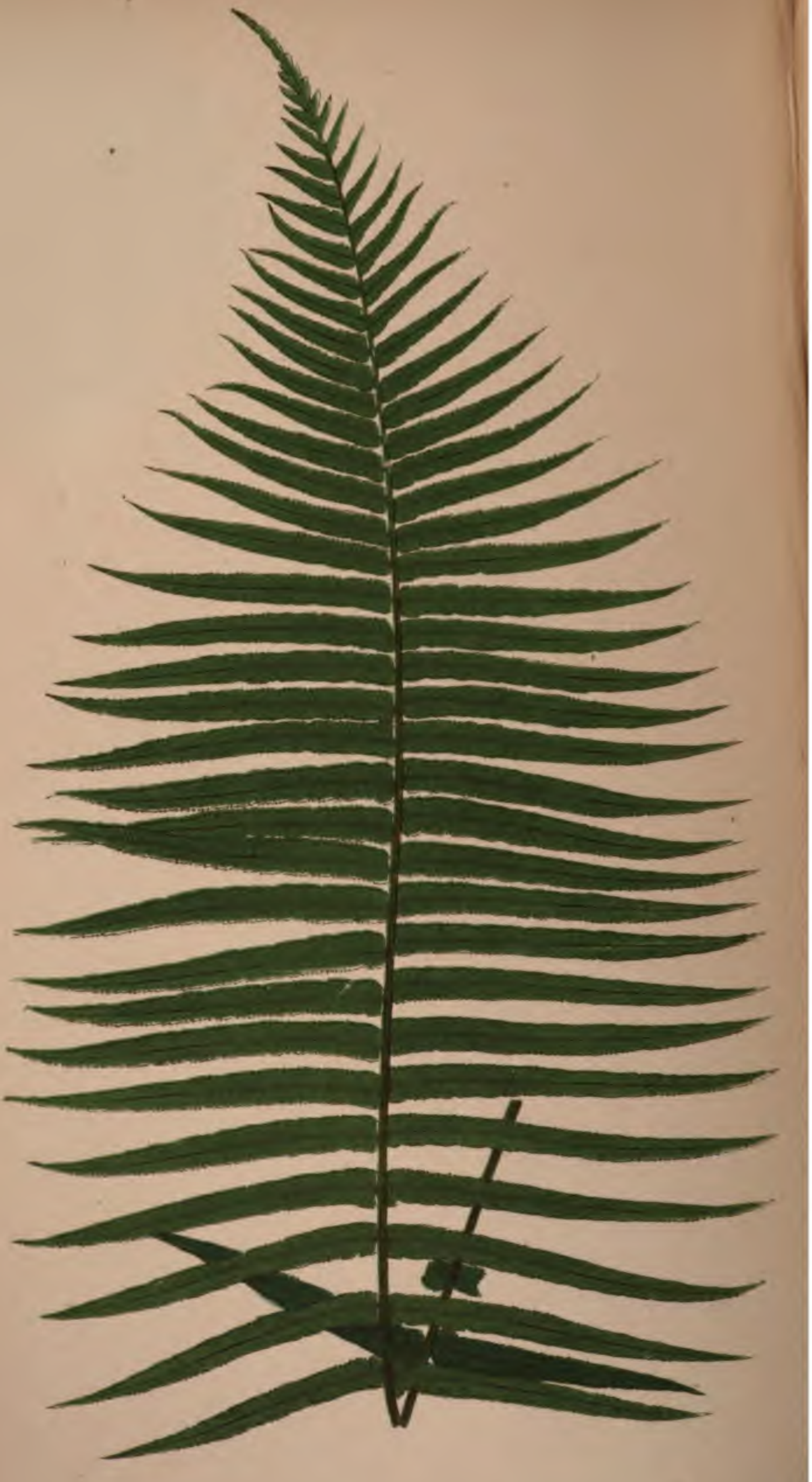
GENUS XIII.

BRAINEA. J. SMITH.

AN interesting new family, represented by a single species, the ***Brainea insignis,*** a native of China.

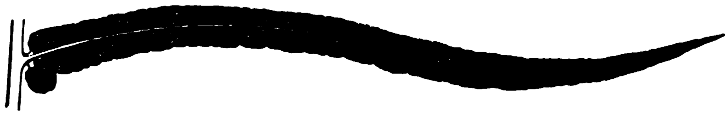
Fronds pinnate, about two feet in length. Veins flabellately forked; the lower venules anastomosing angularly, and forming a costal row of oblique cuneiform areoles.

Sori broad, continuous, or sub-interrupted, transverse, and naked.



BLAINEA INSIGNIS.

XLIX.—VOL. 4.



Pinna of fertile Frond—under side.

BRAINEA INSIGNIS.

J. SMITH.

PLATE XLIX. VOL. IV.

Bowringia insignis, HOOKER.

Brainea—............? *Insignis*—Showy.

A RARE, handsome species, not yet to be found in collections, except at the Royal Gardens, Kew.

An evergreen, greenhouse Fern.

Native of China, having been discovered at Hong Kong.

Introduced into the Royal Gardens, Kew, in 1856.

Fronds pinnate, apex pointed, pinnæ linear-lanceolate; from four to six inches in length, sub-sessile, the base truncate above and articulated below, the margin being crenate-serrulate.

Veins flabellately forked, free exteriorly, the basal venules angularly anastomosing, and forming a costal row of oblique areoles, which are cuneiform.

In the fertile fronds the pinnæ are much contracted; pinnæ linear.

Sori formed on the transverse anastomosing venules and bases of the free venules, and forming a broad continuous or sub-interrupted transverse sorus, destitute of an indusium; eventually confluent.

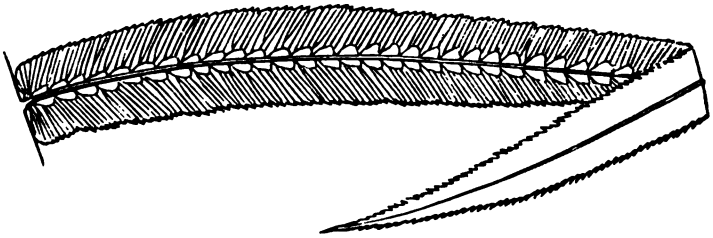
The fronds rising out of an erect, arboreous corm, which attains the height of fifty inches.

Length of frond from twelve to thirty inches.

I have not yet been enabled to procure a plant. For fronds my thanks are due to Mr. Smith, the Curator of the Royal Gardens, Kew.

It is not as yet in any of the Nurserymen's Catalogues.

The illustration is from Mr. Smith's frond.



Pinna of barren Frond—under side.

GENUS XIV.

LOMARIA. Willdenow.

An interesting genus, having simple, pinnatifid, pinnate, or bipinnatifid fronds; the fertile fronds being contracted.

Sori linear, continuous, and indusiate, situated on a somewhat broad linear receptacle, and nearly covering the whole of the under side of the contracted fertile fronds. Indusium opening along the inward side.

The veins of the sterile fronds simple or forked, the venules direct and free. Veins of fertile fronds obsolete, or nearly so.

Length of frond from twelve to thirty-six inches.

There is a solitary British example, viz., *Lomaria spicant*, of Desvaux.

Mr. Smith, in his Catalogue of Ferns cultivated in the Royal Gardens, Kew, enumerates eighteen species, namely:—

Lomaria patersoni, *Sprengel.*
“ lanceolata, *Sprengel.*
“ attenuata, *Link.*
“ l'herminieri, *Bory.*
“ nuda, *Willdenow.*
“ discolor, *Willdenow.*
“ falcata, *Sprengel.*
“ alpina, *Sprengel.*
“ spicant, *Desvaux.*
Lomaria banksii, *Hooker.*
“ australis, *Link.*
“ punctulata, *Kunze.*
“ gilliesii, *Hooker.*
“ minor, *Sprengel.*
“ procera, *Sprengel.*
“ capensis, *Willdenow.*
“ striata, *Willdenow.*
“ boryana, *Willdenow.*

Kunze, in his “Index Filicum,” the following:—

Lomaria alpina
“ attenuata
“ boryana
“ campylotis
“ capensis
“ falcata
“ filiformis
“ fraseri
“ gilliesii
Lomaria hastata
“ lanceolata
“ l'herminieri
“ magellanica
“ meyeriana
“ moritziana
“ nuda
“ onocleoides
Lomaria patersoni
“ procera
“ pumila
“ punctulata
“ pycnophylla
“ spicant
“ splendens
“ stenophylla

Presl, in his "Tentamen Pteridographiæ," the following:—

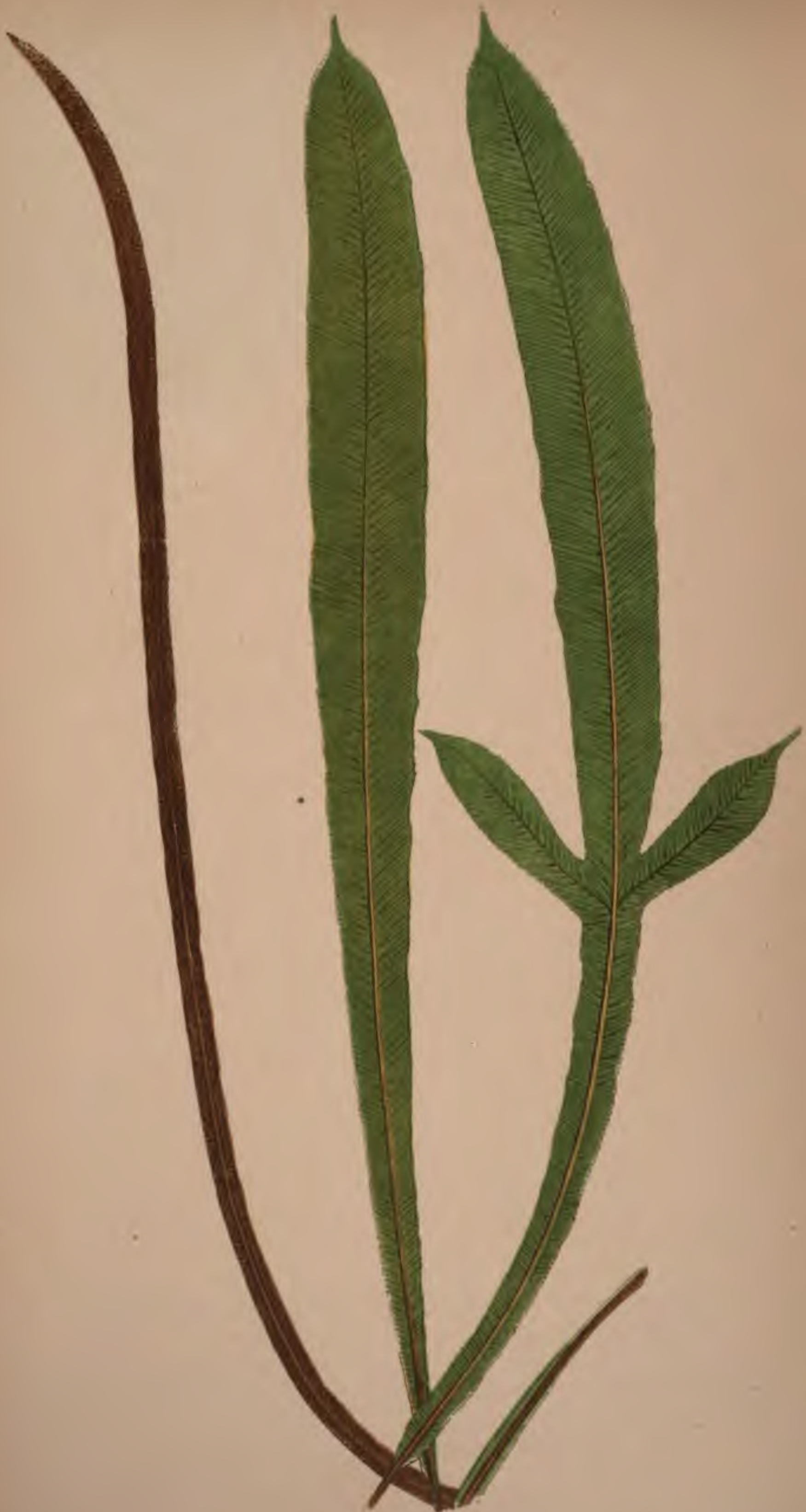
Lomaria spicant
“ onocleoides
“ blechnoides
“ crenata
“ nuda
“ sellowiana
“ australis
“ plumieri
“ sieberiana
“ boryana
“ fraxinea
“ rufa
“ discolor

Lomaria angustifolia
“ pumila
“ gigantea
“ auriculata
“ gibba
“ attenuata
“ scabra
“ ornifolia
“ linearifolia
“ striata
“ lineata
“ schiedeana
“ obtusifolia

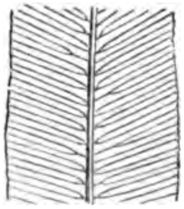
Lomaria brasiliensis
“ chilensis
“ gilliesii
“ cinnamomea
“ capensis
“ densa
“ minor
“ pyrophila
“ lucida
“ acuminata
“ juglandifolia
“ hænkeana
“ heterophylla

Fee, in his "Genres de la Famille des Polypodiacées," gives the annexed list:—

1.—Villosa, *Fee.*
2.—Punctata, *Kunze.*
3.—Decrescens, *Fee.*
4.—Triloba, *Fee.*
5.—Pteropus, *Kunze.*
6.—L' Herminieri, *Bory.*
7.—Heterophylla, *Desvaux.*
8.—Attenuata, *Willdenow.*
9.—Alpina, *Sprengel.*
10.—Lanceolata, *Sprengel.*
11.—Inflexa, *Kunze.*
12.—Spicant, *Desvaux.*
13.—Nuda, *Willdenow.*
14.—Magellanica, *Desvaux.*
15.—Plumieri, *Desvaux.*
16.—Alata, *Kunze.*
17.—Longifolia, *Schlechtendal.*
18.—Gueinzii, *Moug.*
19.—Eriopus, *Kunze.*
20.—Robusta, *Fee.*
21.—Chilensis, *Kaulfuss.*
22.—Callosa, *Fee.*
23.—Euphlebia, *Kunze.*
24.—Glauca, *Blume.*
25.—Ryani, *Kaulfuss.*
26.—Gilliesii, *Hooker.*
27.—Vestita, *Blume.*
28.—Discolor, *Willdenow.*
29.—Boryana, *Willdenow.*
30.—Olivieriana, *Fee.*
31.—Unguiculata, *Fee.*
32.—Scabra, *Kaulfuss.*
33.—Marginata, *Fee.*
34.—Capensis, *Schlechtendal.*
35.—Gibba, *Labillardiere.*
36.—Obtusata, *Labillardiere.*
37.—Puctulata, *Kunze.*
38.—Rigida, *Fee.*
39.—Striata, *Swartz.*
40.—Spissa, *Fee.*
41.—Pumila, *Kaulfuss.*
42.—Procera, *Desvaux.*
43.—Ambigua, *Fee.*
44.—Mucronulata, *Fee.*
45.—Salicifolia, *Fee.*



LOMARIA PATERSONI.—FERTILE AND BARREN F.



Portion of barren Frond—under side.

LOMARIA PATERSONI.

KUNZE. J. SMITH. MOORE AND HOULSTON.

PLATE L. VOL. IV.

Stegania patersoni,	R. BROWN. LINK.
Salpichlæna patersonii,	FEE.
Lomaria patersonii,	SPRENGEL.

Lomaria—From *Loma*—an edge, in reference to the position of the spore cases on the fronds. *Patersoni*—Paterson's.

A VERY distinct dwarf Fern.

An evergreen greenhouse species.

Native of New Holland, Australia, and Tasmania.

Raised from spores in the Royal Gardens, Kew, in the year 1830.

Fronds of two forms. Sterile fronds simple, and occasionally pinnatifid in cultivation, rigid, ensiform-lanceolate in shape, with a crenulate margin. Fertile fronds linear, contracted, narrow, simple, and frequently pinnatifid. Terminal, and adherent to a tufted rhizoma.

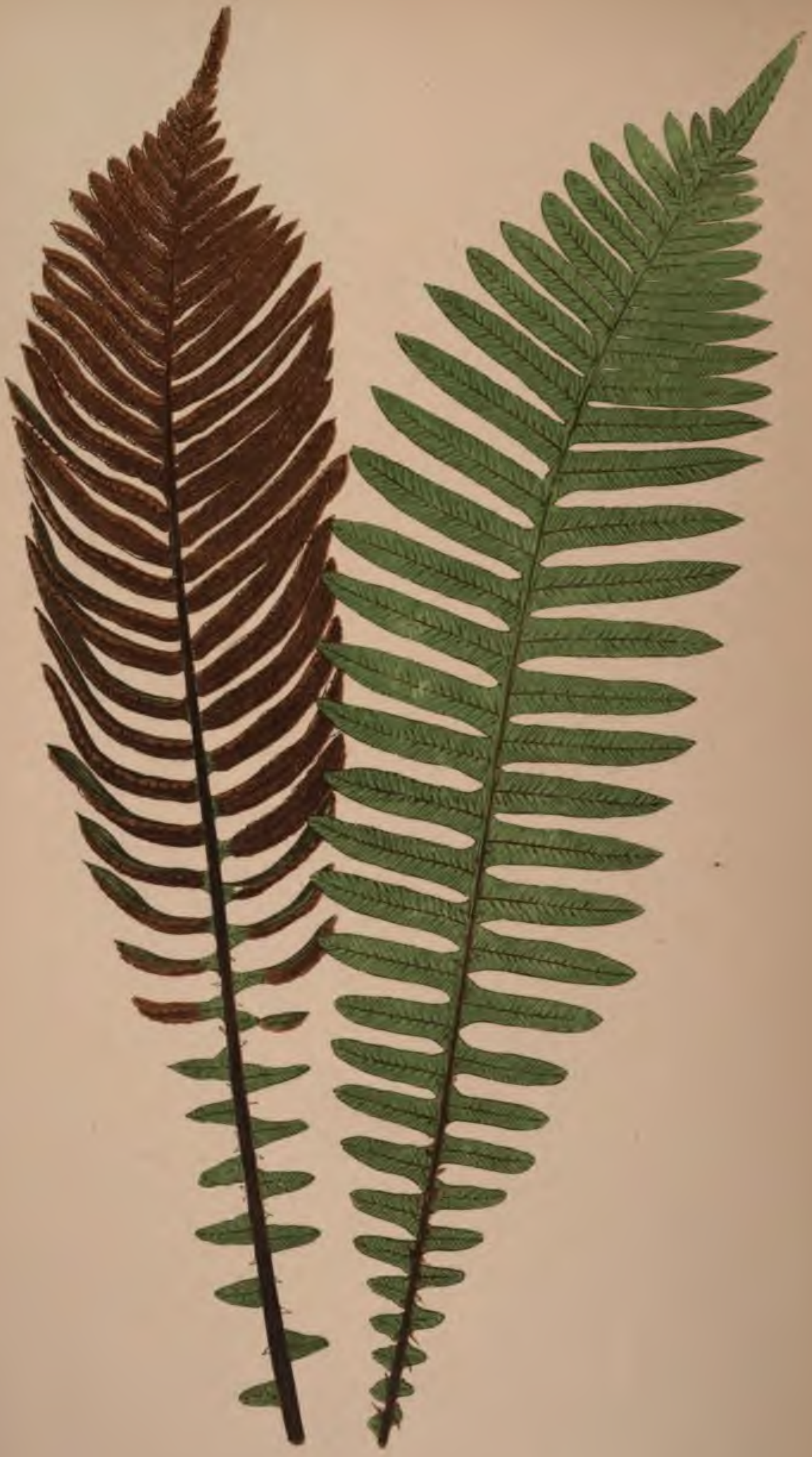
Length of fertile frond twelve inches, and of sterile frond eight or ten inches; colour dark green.

Veins forked.

For plants my thanks are due to Sir Oswald Mosley, Bart., of Rolleston Hall, and to Mr. Veitch, of Chelsea; and for fronds to Mr. G. Norman, of Hull, and Messrs. Booth, of Hamburg.

It is in the Catalogues of Messrs. Veitch, of Chelsea; Sim, of Foot's Cray; Kennedy, of Covent Garden; A. Henderson, of Pine-apple Place; Rollisson, of Tooting; Masters, of Canterbury; Stansfield, of Todmorden; and Cooling, of Derby.

The illustration is from a plant in my own collection.



LOMARIA NUDA.—FERTILE AND BARREN F.

LI—Vol. 4.

Pinna of barren Frond—under side.

LOMARIA NUDA.

WILLDENOW. J. SMITH. KUNZE. PRESL. SPRENGEL.
FEE. MOORE AND HOULSTON.

PLATE LI. VOL. IV.

Onoclea nuda, LABILLARDIERE.

Lomaria—From *Loma*—an edge, in reference to the position of the spore cases on the fronds. *Nuda*—Naked.

AN exceedingly pretty dwarf Fern, easily cultivated.

An evergreen greenhouse species.

Native of New Holland, New Zealand, and Tasmania.

Introduced into the Royal Gardens, Kew, in 1845, having been received from Mr. R. Gunn.

Fronds of two kinds. Sterile frond broadly lanceolate in shape, pinnate, the pinnæ being oblong-lanceolate and adnate. Fertile fronds contracted, close, and pinnate; the pinnæ linear-acuminate and curvate.

Veins forked.

Sori linear and continuous.

Fronds terminal, and adherent to a fasciculate creeping rhizoma.

Length of frond from twelve to eighteen inches; colour light green.

The fertile fronds are thick and heavy in comparison with the sterile fronds.

For a plant my thanks are due to Mr. Sim, of Foot's Cray; and for fronds to Mr. Joseph Henderson, of Wentworth, and to Mr. Norman, of Hull.

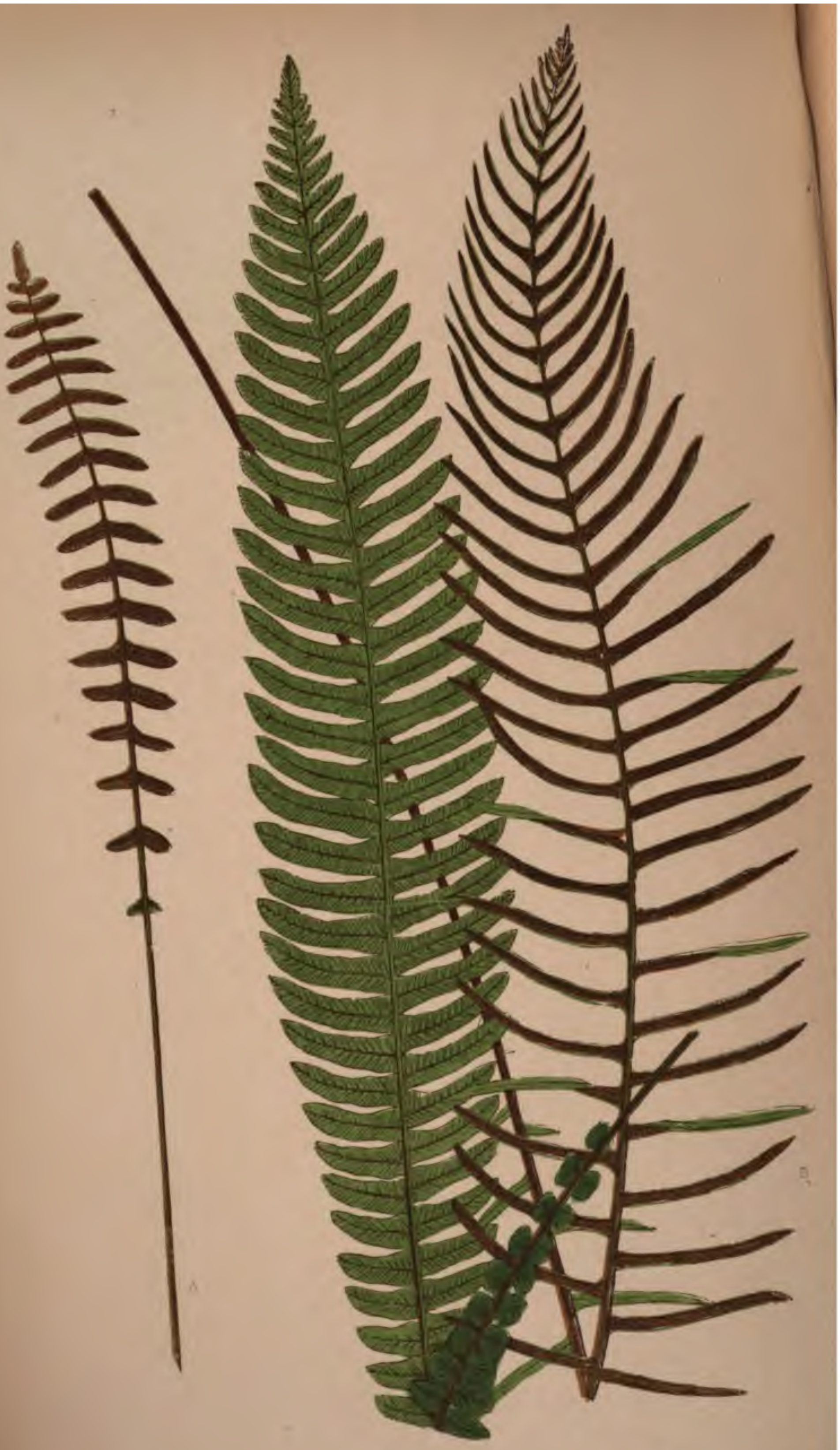
It may be procured of Messrs. Sim, of Foot's Cray; Veitch, of Chelsea; E. G. Henderson, of St. John's Wood; Rollisson, of Tooting; A. Henderson, of Pine-apple Place; Kennedy, of Covent Garden; Booth, of Hamburg; and Stansfield, of Todmorden.

The illustration is from a plant in my own collection.

For a plant my thanks are due to Mr. Sim, of Foot's Cray; and for fronds to Mr. Joseph Henderson, of Wentworth, and to Mr. Norman, of Hull.

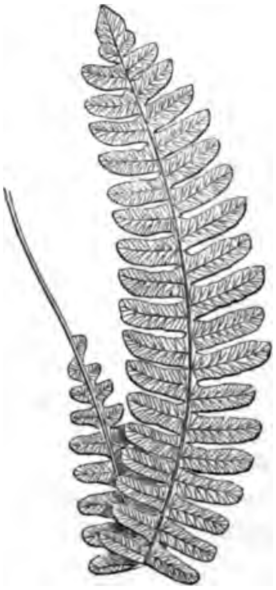
It may be procured of Messrs. Sim, of Foot's Cray; Veitch, of Chelsea; E. G. Henderson, of St. John's Wood; Rollisson, of Tooting; A. Henderson, of Pine-apple Place; Kennedy, of Covent Garden; Booth, of Hamburg; and Stansfield, of Todmorden.

The illustration is from a plant in my own collection.



OMARIA ALPINA. L. SPICANT,—BARREN AND FERTILE F.

LII.—VOL. 4.



Barren Frond.

LOMARIA ALPINA.

SPRENGEL. HOOKER. J. SMITH. KUNZE. FEE.
MOORE AND HOULSTON.

PLATE LII.—A. VOL. IV.

Lomaria antarctica,	CARMICHAEL.
Stegania alpina,	R. BROWN.

Lomaria—From *Loma*—an edge, in reference to the position of the spore cases on the fronds. *Alpina*—Alpine.

A VERY dwarf species, which was introduced into the Royal

Gardens, Kew, in the year 1843, having been brought from the Falkland Islands, by Dr. J. D. Hooker, who was a naturalist on the antarctic expedition under Sir J. C. Ross.

An evergreen, almost hardy Fern.

Native of Tasmania, New Holland, New Zealand, Cape Horn, Falkland Islands, and Antarctic America.

Fronds of two kinds. Sterile fronds lanceolate in form, glabrous, pinnate, the pinnæ being oblong-obtuse in shape, adnate; apex circular, sub-falcate, margin entire. Fertile fronds contracted, lanceolate in form, pinnate, the pinnæ being linear-oblong and sub-falcate.

Fronds lateral, and adherent to a creeping rhizoma.

Veins forked.

Sori linear and continuous.

Length of sterile frond four inches, and of fertile frond six inches; colour bright green.

For plants my thanks are due to Mr. Joseph Henderson, of Wentworth, and to Messrs. Rollisson, of Tooting; and for fronds to Mr. Joseph Henderson, of Wentworth, and to Mr. Robert Wakefield, of London.

It is in the Catalogues of Messrs. Veitch, of Chelsea; Rollisson, of Tooting; A. Henderson, of Pine-apple Place; Sim, of Foot's Cray; E. G. Henderson, of St. John's Wood; Kennedy, of Covent Garden; Booth, of Hamburg; Young, of Taunton; and Cooling, of Derby.

The illustration is from a plant in my own collection.

Portion of barren Frond—under side.

LOMARIA SPICANT.

Desvaux. J. Smith. Kunze. Link. Moore. Withering.
Deakin. Newman. Presl. Fee. Sprengel.

PLATE LII.—B. VOL. IV.

Osmunda spicant,	Linnæus. Bolton.
Blechnum boreale,	J. E. Smith. Swartz.
" "	Schkuhr. Hooker & Arnott.
" "	Babington. Sowerby.
" *spicant,*	Roth. Moore.
Onoclea spicant,	Hoffmann.
Struthiopteris spicant,	Scopoli. Weis.
Lomaria borealis,	Link.
Osmunda borealis,	Salisbury.
Asplenium spicant,	Bernhardi.
Acrostichum spicant,	Villars.
" *nemorale,*	Lamarck.
Stegania borealis,	R. Brown.
Spicanta borealis,	Presl.

Lomaria—From *Loma*—an edge, in reference to the position of the spore cases on the fronds. *Spicant*—Spiked.

A VERY pretty, indigenous, hardy, evergreen species, known in Great Britain as the Common Hard Fern, and tolerably common, although in some degree local throughout England, Scotland, Ireland, and Wales, growing in stony, heathy places, where there is abundance of moisture. Easily grown as a pot-plant, and exceedingly handsome when a fine specimen.

Common throughout Europe, Kamtschatka, Sitka, Cape of Good Hope, Madeira, Azores, Teneriffe, the Canary Islands, Sicily, Crete, etc.

Fronds of two kinds. Sterile fronds linear-lanceolate in form, pectinate-pinnatifid, frequently pinnate below, with oblong linear flat lobes; prostrate in habit. The fertile fronds erect, contracted, pinnate, having linear acute pinnæ with reflexed margins.

Caudex scaly, erect, or decumbent. Stipes of sterile frond brief, occasionally four or five inches in length, densely scaly at the base, those of the fertile frond longer.

Stipes and rachis purplish in colour.

Veins forked, ending in a club-shaped head immediately within the margin of the frond.

Sori indusiate, linear, extending on either side the midrib, and running the whole length of the contracted pinnæ, soon becoming confluent.

Indusium narrow and linear.

Occasionally subject to variety.

Mr. Moore, in his "Hand-book of British Ferns," describes the following varieties:—

1.—*Ramosum.*—A branching tasseled variety, very rare. It has been found in Ireland, by Dr. Kinahan and Captain Eden, and at Windermere, by Mr. Hudhart.

2.—*Multifurcatum.*—The apex many-times forked, not crispy tufts as in the variety *ramosum.* It was found at Penryn, by Mr. F. Symons.

3.—*Lancifolium.*—Upper half of frond entire; very rare. Mr. Wollaston found it at Tunbridge Wells.

4.—*Heterophyllum.*—An irregular-formed frond. Found by Mr. Wollaston, at Tunbridge Wells.

5.—*Strictum.*—Rare. Lobes of frond irregularly shortened. Miss Beever and Mr. Clowes found it in Westmorland, and Dr. Allchin in Ireland.

6.—*Serratum*.—Much serrated. Found by Mr. Wollaston, at Tunbridge Wells.

7.—*Bifidum*.—Lobes bifid.

8.—*Fissum*.—Rachis split down at apex. Found at Tunbridge Wells.

9.—*Multifidum*.—Apices of fronds multifid.

10.—*Crispum*.—Apices of fronds dilated, and forming a small wavy tassel. Mr. Wollaston found it at Tunbridge Wells, and Dr. Kinahan in Ireland.

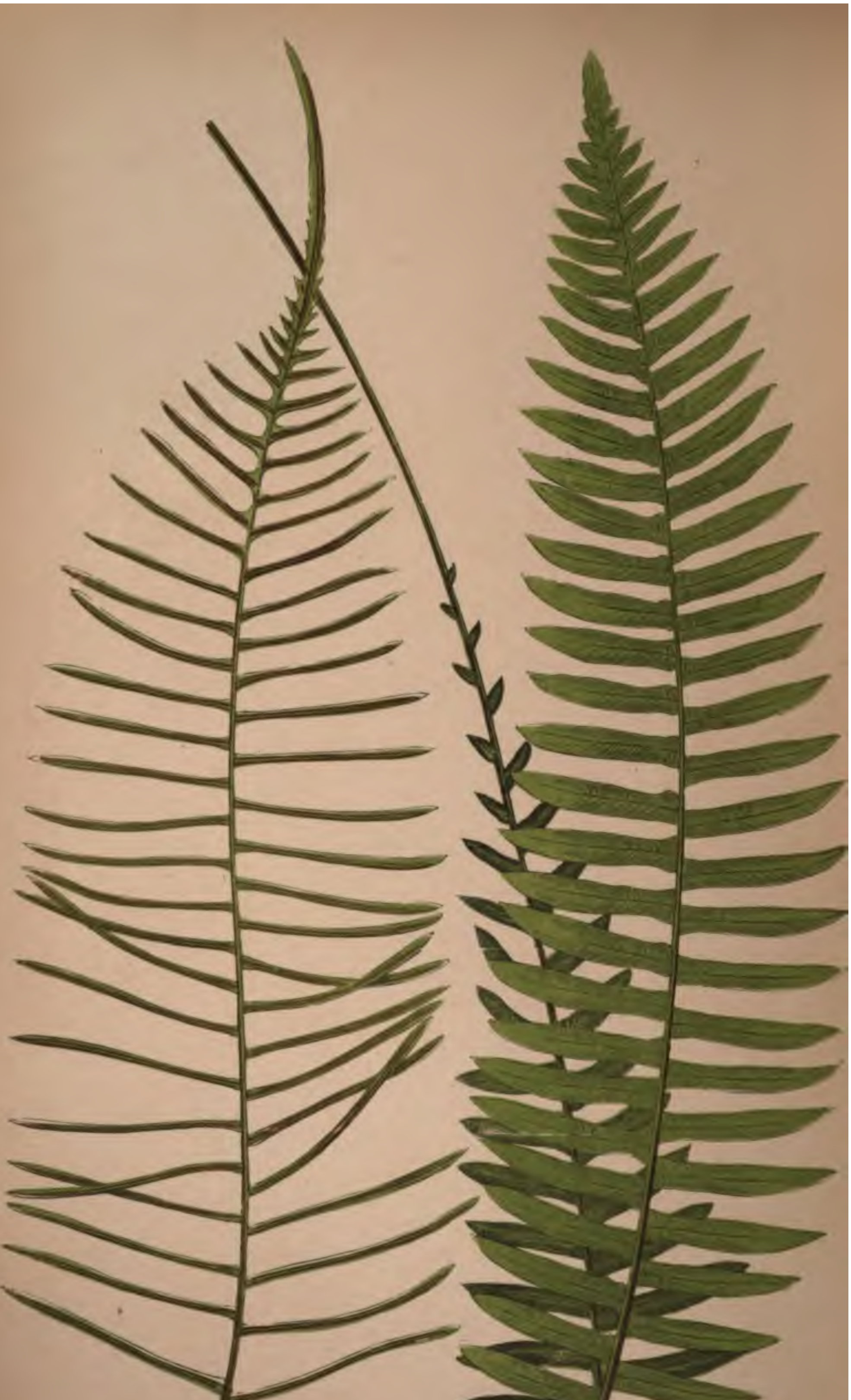
11.—*Trinervium*.—Fronds trifoliate. Found in Ireland, by Dr. Kinahan.

For plants my thanks are due to Mr. Joseph Sidebotham, of Manchester; Mr. William Winstanley, of Chaigeley Manor, Lancashire; and to Mr. Howard, of Dykes Hall, near Sheffield.

It can be procured of any Nurseryman, but in all probability may be found within two or three miles of the person seeking it.

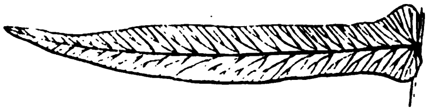
The varieties *ramosum*, *multifidum*, and *heterophyllum*, can be supplied by Mr. Sim, of Foot's Cray.

The illustration is from a plant in my own collection.



LOMARIA PUNCTULATA.—FERTILE AND BARREN F.

LIII.—VOL. I.



Pinna of barren Frond—under side.

LOMARIA PUNCTULATA.

KUNZE. SMITH.

PLATE LIII. VOL. IV.

Lomaria densa,	KAULFUSS.
" *auriculata,*	DESVAUX. SPRENGEL.
Blechnum punctulatum,	SWARTZ. SCHLECHTENDAL.

Lomaria—From *Loma*—an edge, in reference to the position of the spore cases on the frond. *Punctulata*—............?

AN interesting, rare species.

An evergreen greenhouse Fern.

Native of the Cape of Good Hope.

Fronds pinnate, pinnæ sessile, slightly imbricate, auriculate; sterile pinnæ linear-lanceolate, abruptly auriculate; fertile pinnæ linear, base above sub-auriculate.

Pinnæ two inches in length, alternate; sterile pinnæ glabrous, entire, base sub-cordate-truncate, auriculate above, rotundate below, inferior oblong, minute, and obtuse.

Stipes covered with subulate chaffy scales.

Rachis above sulcate.

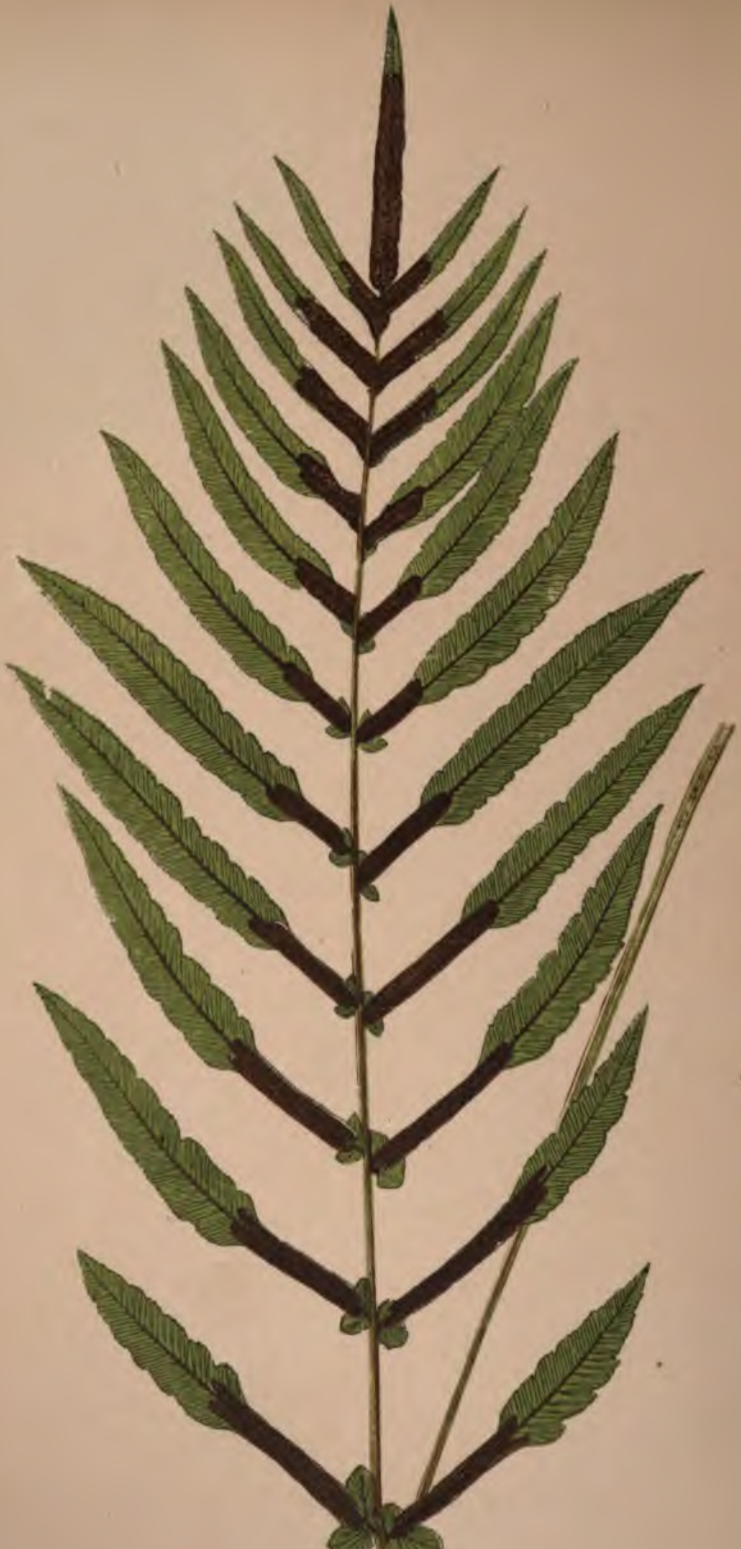
Sori linear and continuous. Indusium submarginal and continuous.

Length of frond eighteen inches.

For fronds my thanks are due to Sir W. J. Hooker, Director of the Royal Gardens, Kew, and to Mr. Thomas Downs, of Hillsbro' Terrace, Ilfracombe.

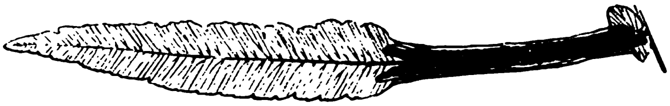
It is not in any of the Nurserymen's Catalogues.

The illustration is from Sir W. Hooker's fronds.



LOMARIA GILLIESII.

LIV—Vol. 4.



Pinna of fertile Frond—under side.

LOMARIA GILLIESII.

HOOKER AND GREVILLE. J. SMITH. KUNZE. LINK. PRESL. FEE. MOORE AND HOULSTON. SCHOTT.

PLATE LIV. VOL. IV.

Lomaria—From *Loma*—an edge, in reference to the position of the spore cases on the fronds. *Gilliesii*—Named after Gillies.

A PRETTY evergreen greenhouse Fern.

Native of Brazil and Chili.

Introduced into the Royal Gardens, Kew, in the year 1841, having been received from the Royal Botanic Gardens of Berlin.

Fronds of two kinds. Fertile fronds contracted, pinnate, the pinnæ being linear and acute. Sterile fronds ovate-lanceolate in form, glabrous, pinnate; the pinnæ oblique, oblong-ovate, and acute; the inferior ones being petiolate, and in some degree cordate at the base. Margin serrate.

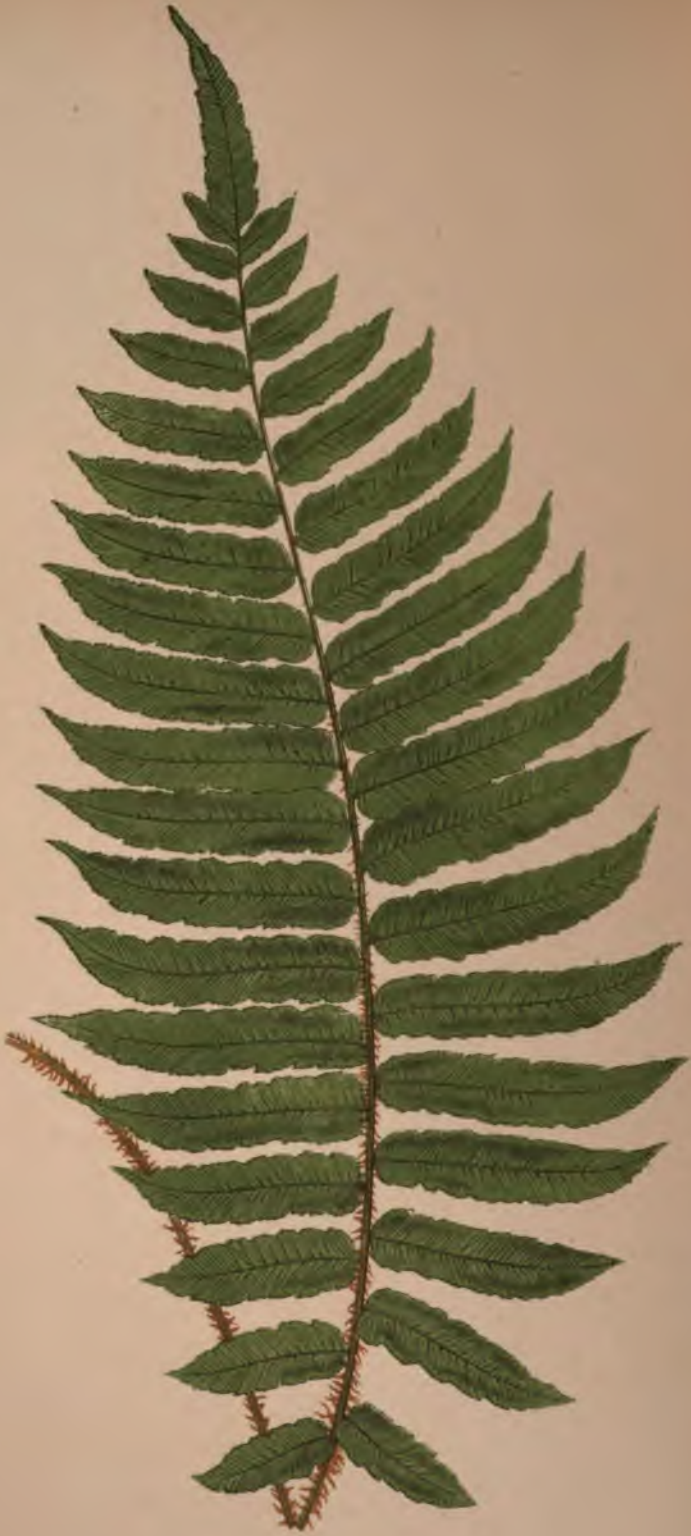
Fronds terminal, being attached to an upright fasciculate rhizoma.

Stipes scaly.

Sori linear, elongate, and continuous.

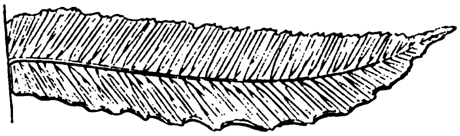
Veins of the sterile fronds forked.

Length of frond from twelve to twenty inches; colour a dull green.



LOMARIA PROCERA—BARREN FROND.

LV—VOL. 4.



Pinna of barren Frond—under side.

LOMARIA PROCERA.

SPRENGEL. HOOKER. J. SMITH. KUNZE. FEE.
DESVAUX. JACQUIN.

PLATE LV. VOL. IV.

Osmunda procera,	FORSTER.
Blechnum procerum,	LABILLARDIERE. SWARTZ.
Stegania procera,	R. BROWN. RICHARD.
Asplenium procerum,	BERNHARDI.

Lomaria—From *Loma*—an edge, in reference to the position of the spore cases on the fronds. *Procera*—Tall.

AN interesting, rare Fern.

An evergreen greenhouse species.

Native of New Holland, New Zealand, and Tasmania.

The fronds, which are pinnate, are sterile, the pinnæ being subpetiolate, oblique, cordate, oblong, acute, and serrulate; the fertile pinnæ, which are contracted, are linear, very entire and narrow, and frequently unilateral.

Stipes paleaceous.

Sori linear.

Length of frond from two to three feet.

Raised in the Royal Gardens, Kew, in the year 1833.

For barren fronds my obligations are due to Sir W. J. Hooker, Director of the Royal Gardens, Kew.

It is not in any of the Nurserymen's Catalogues.

The illustration is from a frond sent by Sir William Hooker.

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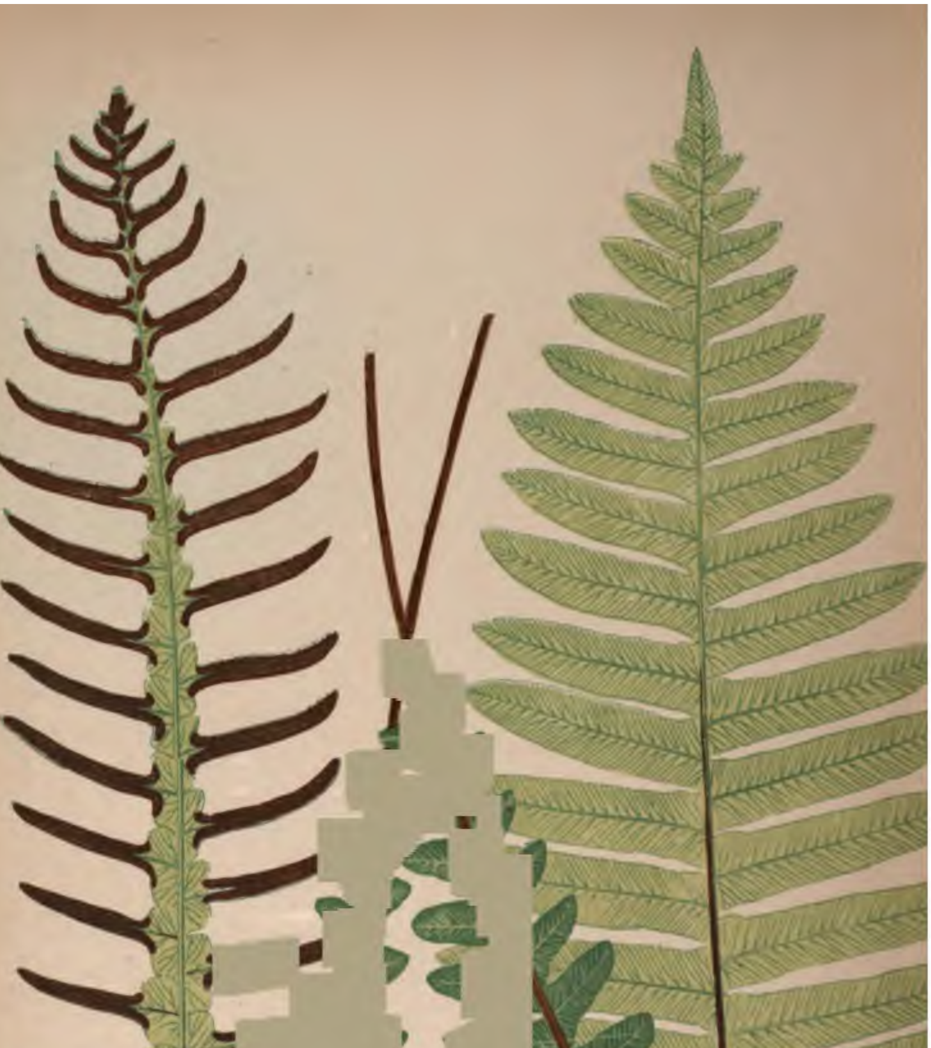
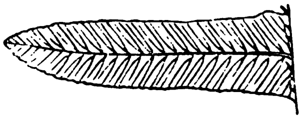


LOMARIA DISCOLOR—FERTILE AND BARREN F.

LVI—VOL. 4.



Pinna of barren Frond—under side.

LOMARIA DISCOLOR.

WILLDENOW. J. SMITH. PRESL. FEE. SPRENGEL.

PLATE LVI. VOL. IV.

Hemionitis discolor,	SCHKUHR.
Osmunda discolor,	FORSTER.
Onoclea discolor,	SWARTZ.

Lomaria—From *Loma*—an edge, in reference to the position of the spore cases on the fronds. *Discolor*—Two-coloured.

A MAGNIFICENT Fern, worthy of a place in every collection. It is at present rare in cultivation in Great Britain.

An evergreen stove species.

Native of Brazil.

The fronds, which are pinnate, are linear-lanceolate in form; sterile pinnæ alternate; sessile, oblong, somewhat acute, sub-serrulate; rich green above, and a whitish green beneath. Fertile pinnæ linear, with a dilated base.

Indusium denticulate, with hairs.

The sterile pinnæ are smooth an inch in length from the centre of the frond to within two inches of the apex, where they rapidly become less; below the centre of the frond they gradually become smaller, and are very small at the base. Veins forked and transparent. In the fertile frond the basal pinnæ are similar to those of the sterile frond, above which linear, with a broad basal portion, giving the frond a singular appearance.

Sori linear, continuous, and of a pale reddish brown colour.

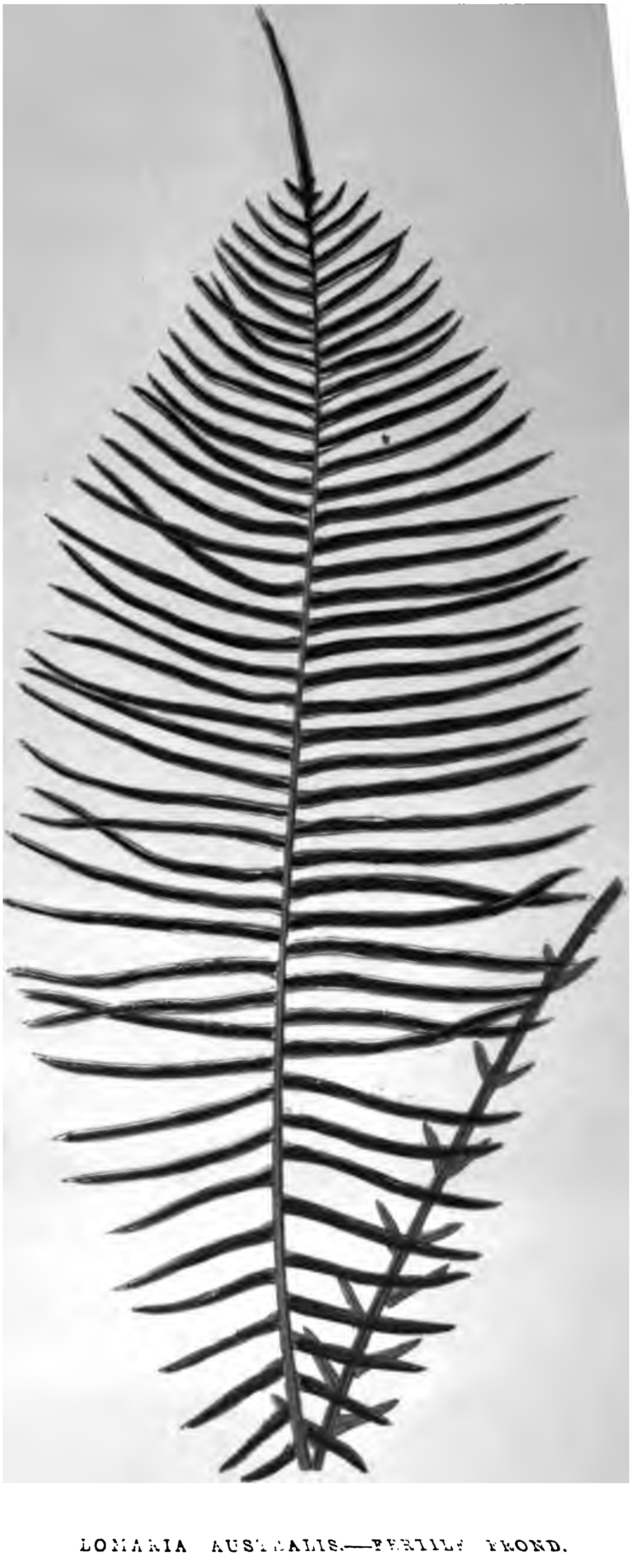
Basal portion of the frond hirsute, with long, narrow, hair-like scales of a dark brown colour.

Length of frond from eighteen to twenty inches, the lower two or three inches being naked. Width at widest part from two to three inches.

For fronds of this handsome Fern I am indebted to Mr. Joseph Henderson, of Wentworth; and to Mr. R. Sim, of Foot's Cray.

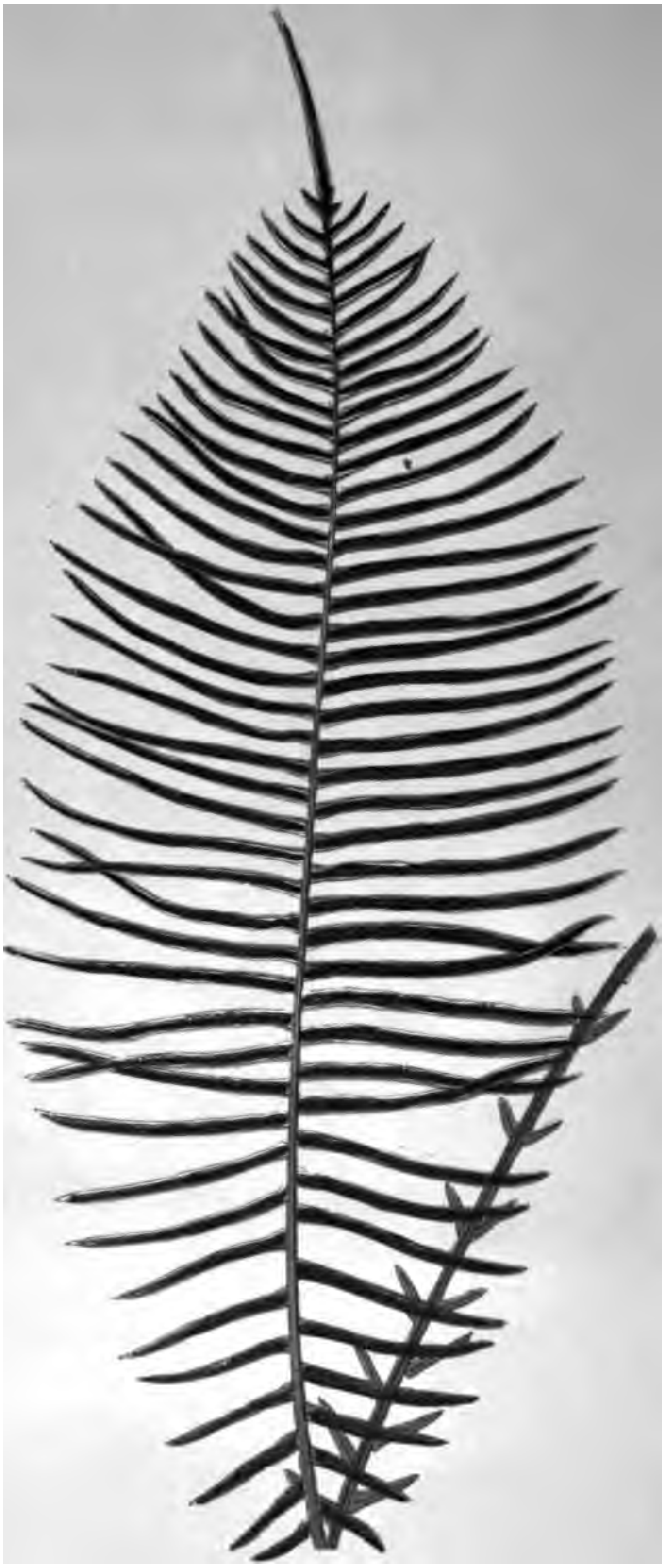
It is in the Catalogues of Messrs. Sim, of Foot's Cray; and E. G. Henderson, of St. John's Wood.

The illustrations are barren and fertile fronds from Mr. R. Sim's plants.



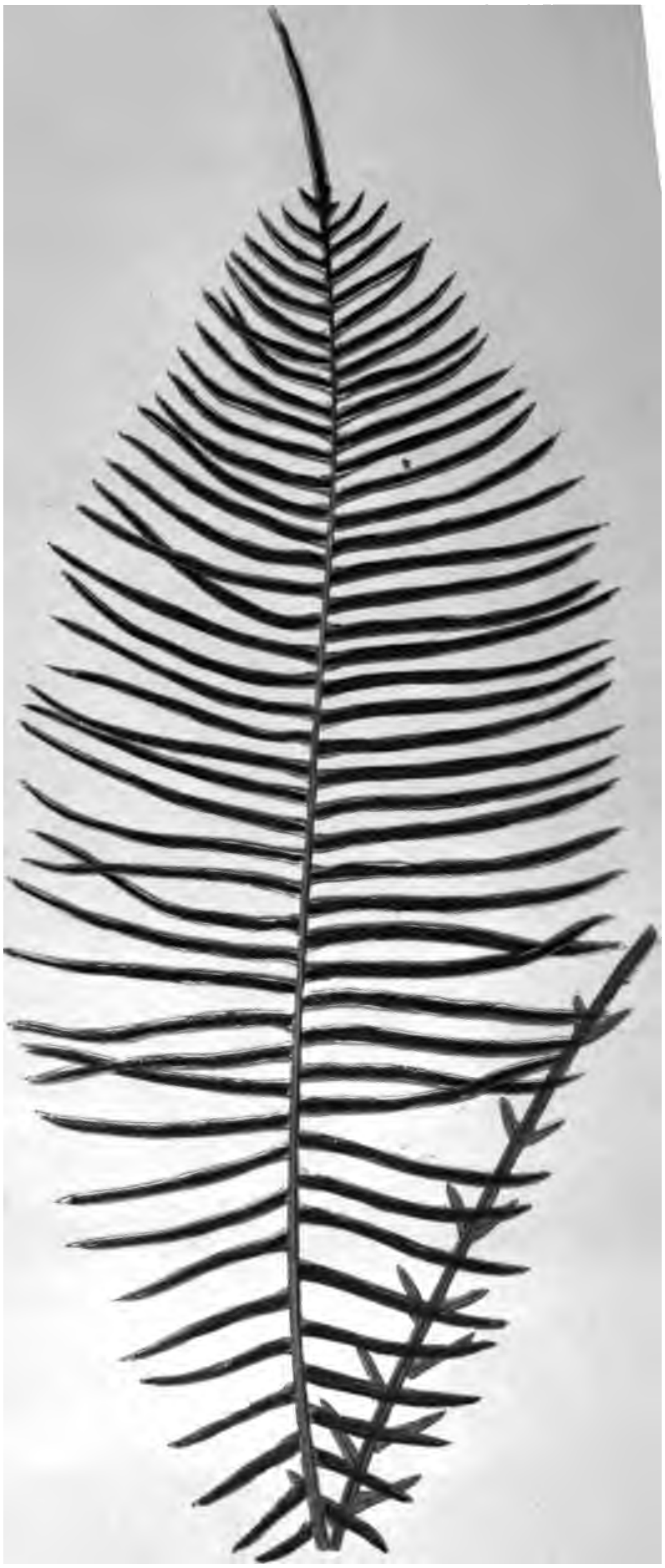
LOMARIA AUSTRALIS.—FERTILE FROND.

LVII.—Vol. 4.



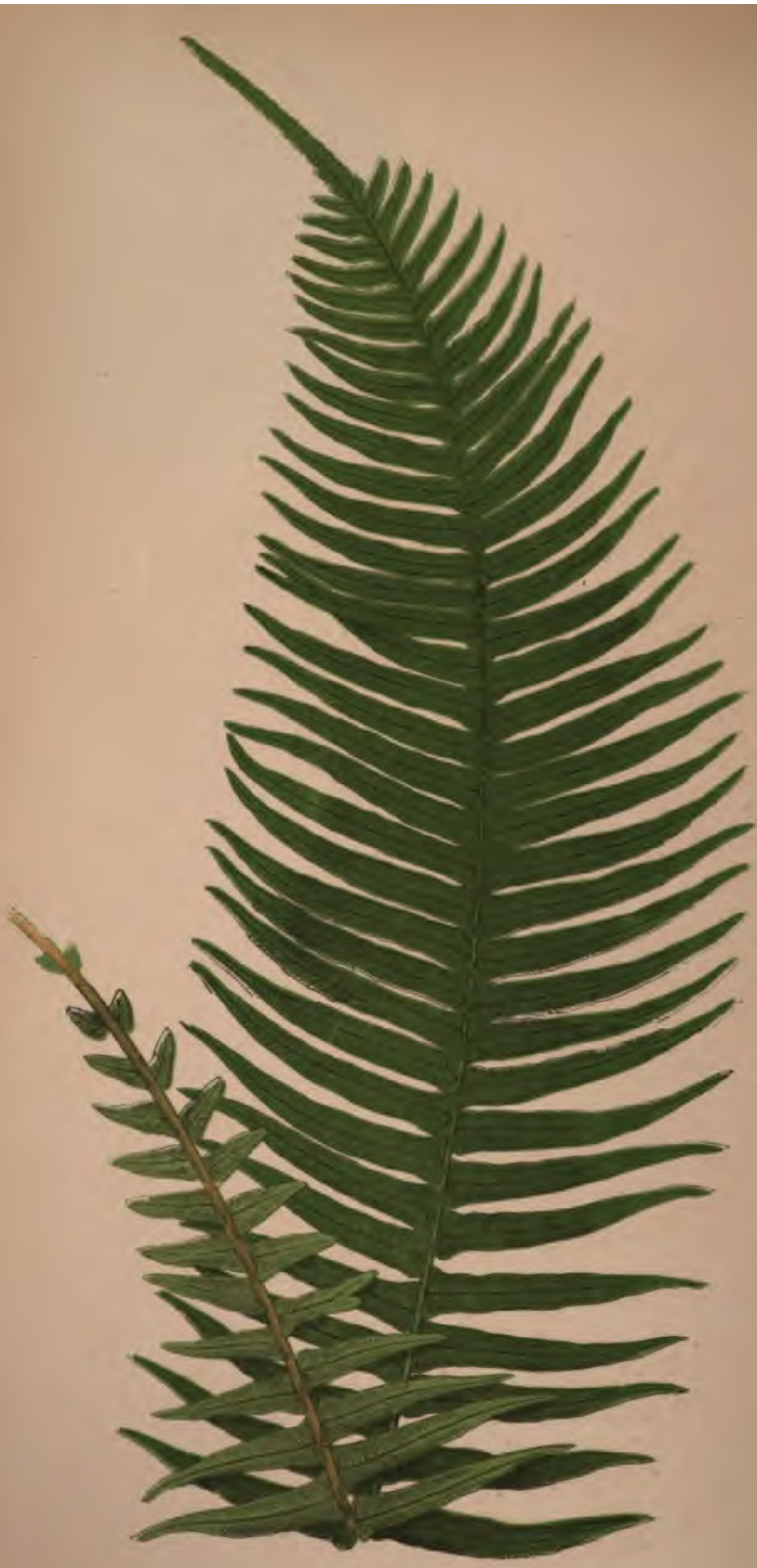
LOMARIA AUSTRALIS.—FERTILE FROND.

LVII—VOL. 4.



LOMARIA AUSTRALIS.—FERTILE FROND.

LVII—VOL. 4.



LOMARIA AUSTRALIS—BARREN FROND.

LVIII—VOL. 4.

Pinna of fertile Frond—under side.

LOMARIA AUSTRALIS.

LINK. J. SMITH. KUNZE. PRESL.

PLATES LVII AND LVIII. VOL. IV.

Blechnum australe,	LINNÆUS. SCHKUHR. THUNBERG.
" "	SCHLECHTENDAL.
" *rigidum,*	WILLDENOW.
" *auriculatum,*	WILLDENOW.
" *trilobum,*	PRESL.
Lomaria pumila,	KAULFUSS. KUNZE. FEE.
" "	SCHKUHR.
" *minor,*	LINK.

Lomaria—From *Loma*—an edge, in reference to the position of the spore cases on the fronds. *Australis*—Southern.

ONE of the most beautiful of the family of *Lomaria*, and rare in cultivation in this country.

An evergreen greenhouse species.

Native of the Cape of Good Hope.

Introduced into the Royal Gardens, Kew, in the year 1839.

The fronds are pinnate, and very symmetrical in form. The sterile pinnæ oblong or lanceolate, obtuse, sessile, and superior adnate. Terminal pinna elongate; fertile pinnæ approximate. longer, very narrow, linear-oblong, and with the base auriculate,

Fronds glabrous, caudex cœspitose, rachis squamulose.

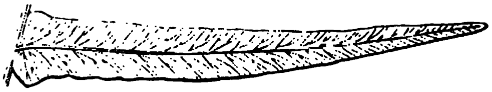
Sori linear and continuous.

Length from twelve, to twenty-four inches; colour rich dark shining green.

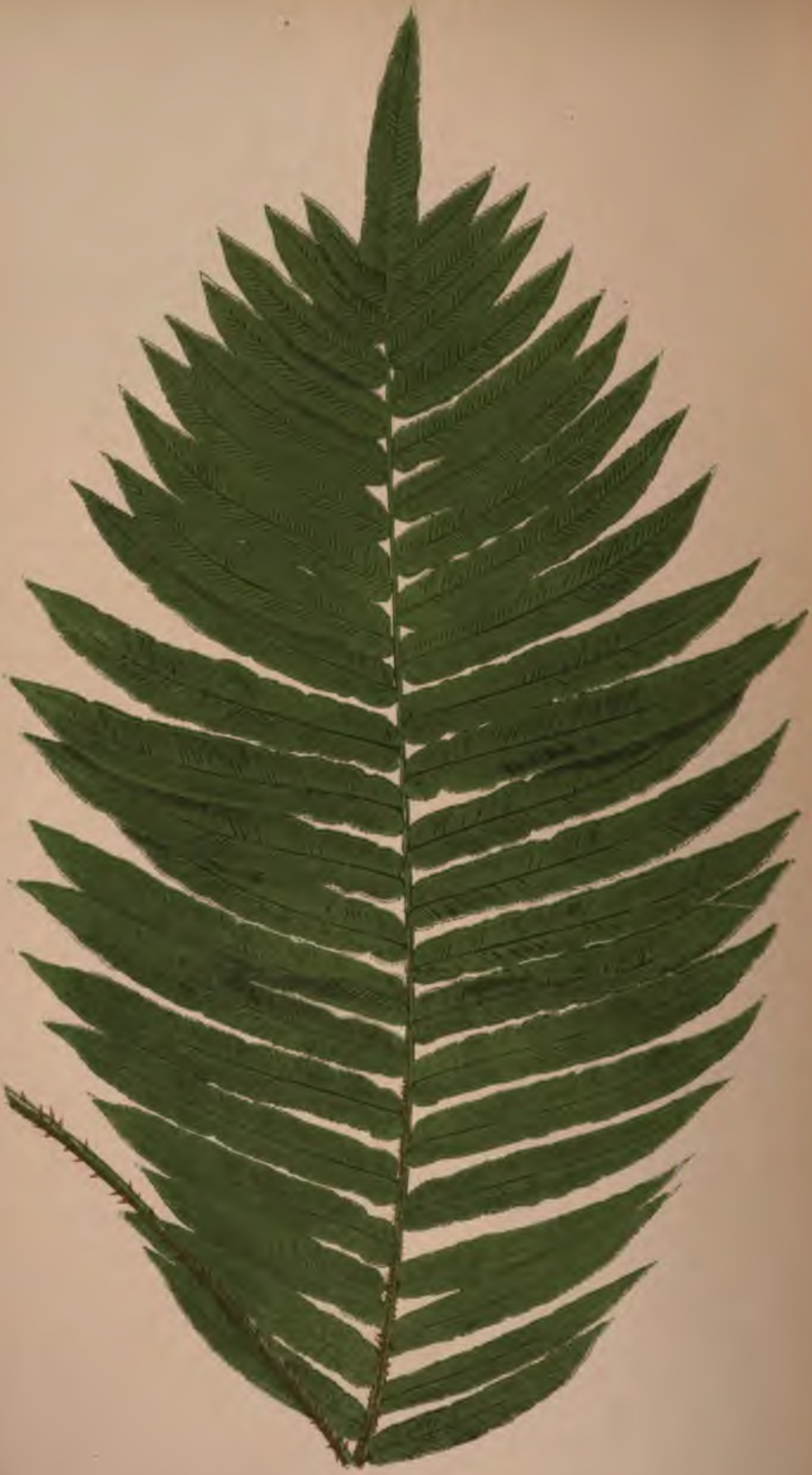
For a plant of this species my obligations are due to Mr. Thomas Downes, of Ilfracombe; and for fronds to Mr. J. Smith, of the Royal Gardens, Kew.

It is in the Catalogues of Messrs. Rollisson, of Tooting, and Kennedy, of Covent Garden.

The illustrations are a barren and a fertile frond from a plant in my own collection.

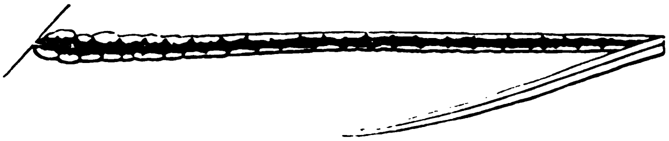


Pinna of barren Frond—under side.



LOMARIA CAPENSIS.—BARREN FROND.

LX.—VOL. 4.



Pinna of fertile frond—under side.

LOMARIA CAPENSIS.

WILLDENOW. SCHLECHTENDAL. J. SMITH. KUNZE. PRESL. FEE. SPRENGEL. MOORE AND HOULSTON. SCHOTT.

PLATES LIX AND LX. VOL. IV.

Onoclea capensis,	LINNÆUS. SWARTZ. THUNBERG.
Osmunda capensis,	LINNÆUS.
Lomaria cordata,	DESVAUX.
" *gigantea,*	OF GARDENS.

Lomaria—From *Loma*—an edge, in reference to the position of the spore cases on the fronds. *Capensis*—From the Cape of Good Hope.

A STRONG-GROWING species, and rather a coarse-looking Fern.

An evergreen greenhouse Fern.

Native of the Cape of Good Hope.

The fronds are pinnate. Sterile fronds glabrous; the pinnæ linear-lanceolate, undulate, cordate at the base, and crenulate on the margin; length about six inches. The fertile fronds, which have the pinnæ entire, are linear-acuminate, and six inches long.

Fronds terminal, adherent to a stout creeping rhizoma.

Stipes scaly at the base.

Sori linear and continuous.

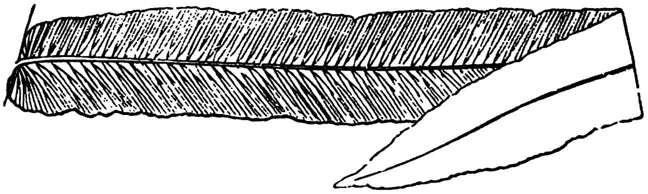
Veins forked.

Length of frond from twenty-five to thirty-five inches; colour dark green.

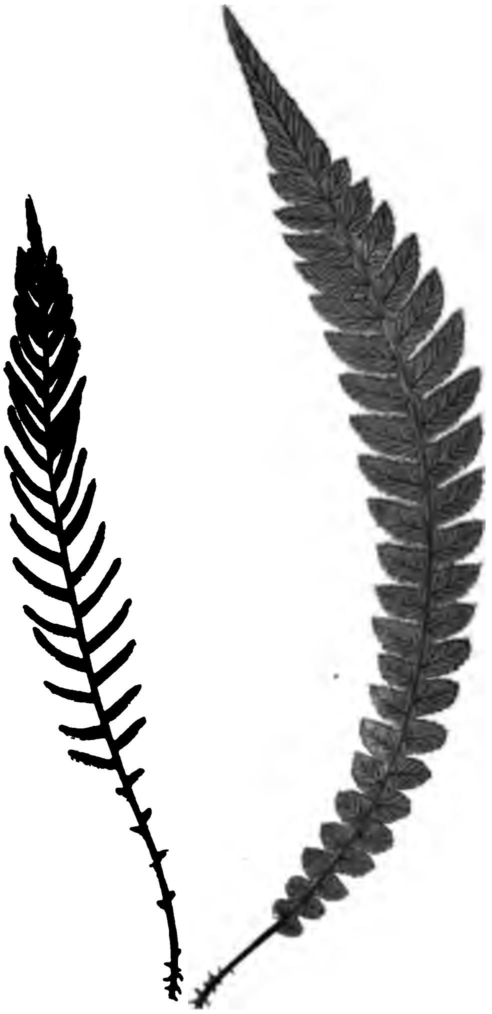
For a plant of this species my thanks are due to Mr. Thomas Downes, of Ilfracombe; and for fronds to Sir W. J. Hooker, Director of the Royal Gardens, Kew.

It is in the Catalogue of Mr. Kennedy, of the Bedford Conservatory, Covent Garden.

The illustration is from Sir W. J. Hooker's fronds.



Pinna of sterile Frond—under side.



LOMARIA LANCEOLATA.—FERTILE AND BARREN S.

LXI—Vol. 4.

Portion of barren Frond.

LOMARIA LANCEOLATA.

SPRENGEL. HOOKER. J. SMITH. KUNZE. FEE.
MOORE AND HOULSTON.

PLATE LXI. VOL. IV.

Stegania lanceolata, R. BROWN.

Lomaria—From *Loma*—an edge, in reference to the position of the spore cases on the fronds. *Lanceolata*—Lanceolate.

AN interesting dwarf Fern.

An evergreen greenhouse species.

Native of New Zealand and Tasmania.

Raised from spores in the Royal Gardens, Kew, in the year 1833.

The sterile fronds, which are glabrous, are lanceolate in form, sub-pinnate, segments rigid, oblong-obtuse, and repand, the margin entire.

Fertile fronds lanceolate, pinnate, pinnæ contracted, linear, acute, and repand.

The fronds, which are terminal, are adherent to a somewhat tufted rhizoma.

Veins forked.

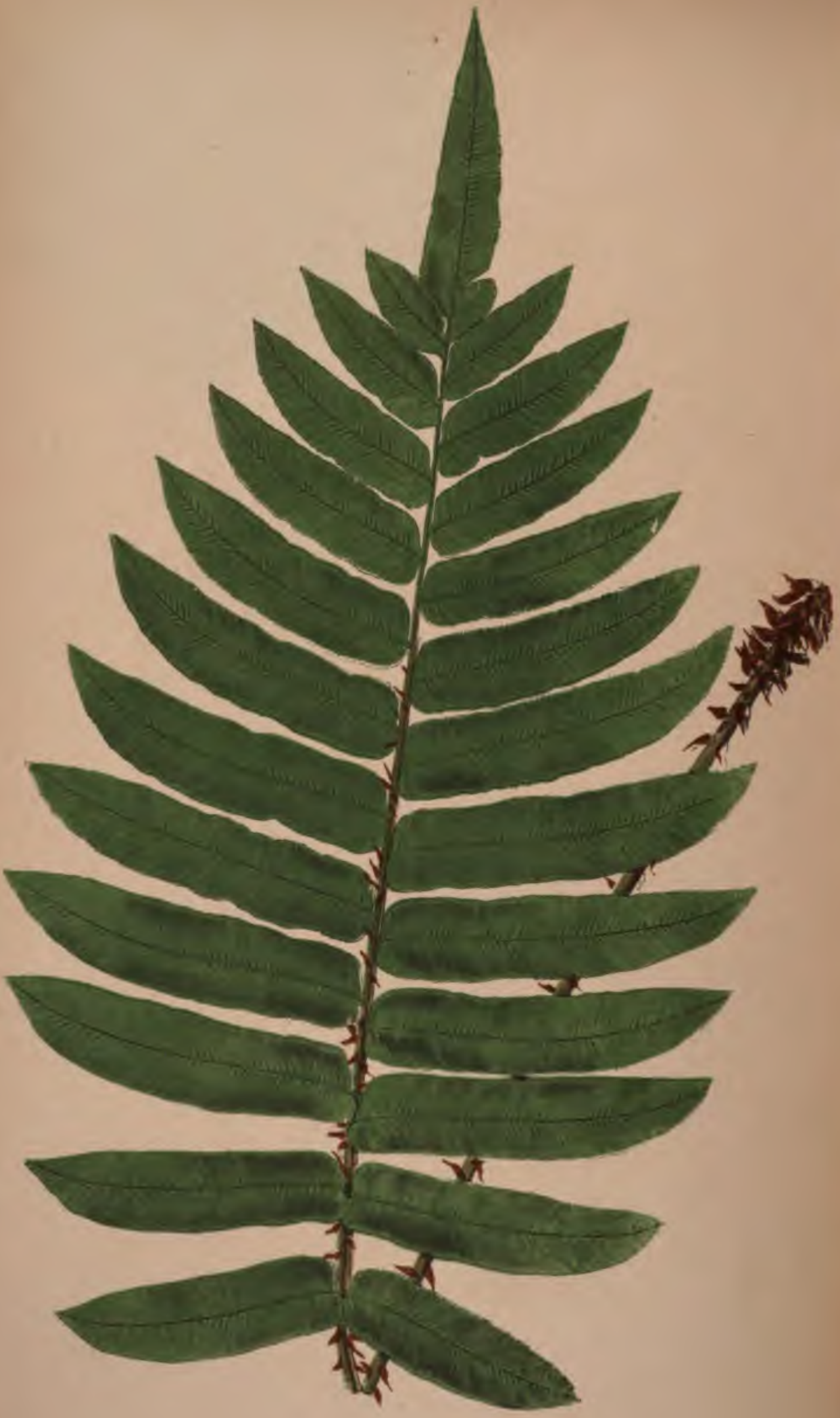
Sori linear and continuous.

Length of frond from eight to ten inches; colour a dull green.

My thanks are due to Mr. Joseph Henderson, of Wentworth, for plants and fronds of this species.

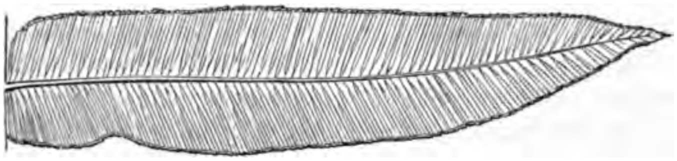
It is in the Catalogues of Messrs. Veitch, of Chelsea; Sim, of Foot's Cray; and Kennedy, of Covent Garden.

The illustration is from Mr. J. Henderson's fronds.



LOMARIA BORYANA.

LXII—VOL. 4.



Pinna of sterile Frond—under side.

LOMARIA BORYANA.

Willdenow. J. Smith. Kunze. Presl. Fee.
Sprengel. Schott.

PLATE LXII. VOL. IV.

Pteris osmundoides,	Bory.
Lomaria magellanica,	Moore and Houlston.
" "	Desvaux.
" *robusta,*	Carmichael.
" *setigera,*	Gaudichaud.
" *obtusifolia,*	Presl.
" *zamioides,*	Gardner.
Blechnum boryana,	Schlechtendal.
Onoclea boryana,	Swartz.

Lomaria—From *Loma*—an edge, in reference to the position of the spore cases on the fronds. *Boryana*—Named after Bory.

A distinct, handsome, robust-growing species, scarce in cultivation.

An evergreen frame or greenhouse Fern.

Native of the Falkland Islands, Chili, Terra del Fuego, Rio Grande, the island of Juan Fernandez, British Guiana, the island of Tristan d' Acunha, and the Organ Mountains of Brazil.

Introduced into the Royal Gardens, Kew, in 1843, having been brought from the Falkland Islands, by Dr. Joseph Dalton Hooker.

The sterile fronds ovate-lanceolate in form, and pinnate; the pinnæ being linear-lanceolate, coriaceous, and acute; inferior sub-petiolate, superior adnate, base decumbent, and the margin entire; pinnæ approximate, opposite near the base of the frond, sub-opposite in the centre of the frond, and alternate near the apex. Terminal pinna larger than those near the apex of the frond. Fertile fronds pinnate, the pinnæ being linear and acute.

Fronds terminal, and adherent to an erect rhizoma.

Stipes and rachis scaly, especially near the base; the scales reddish brown in colour.

Veins forked.

Sori linear and continuous.

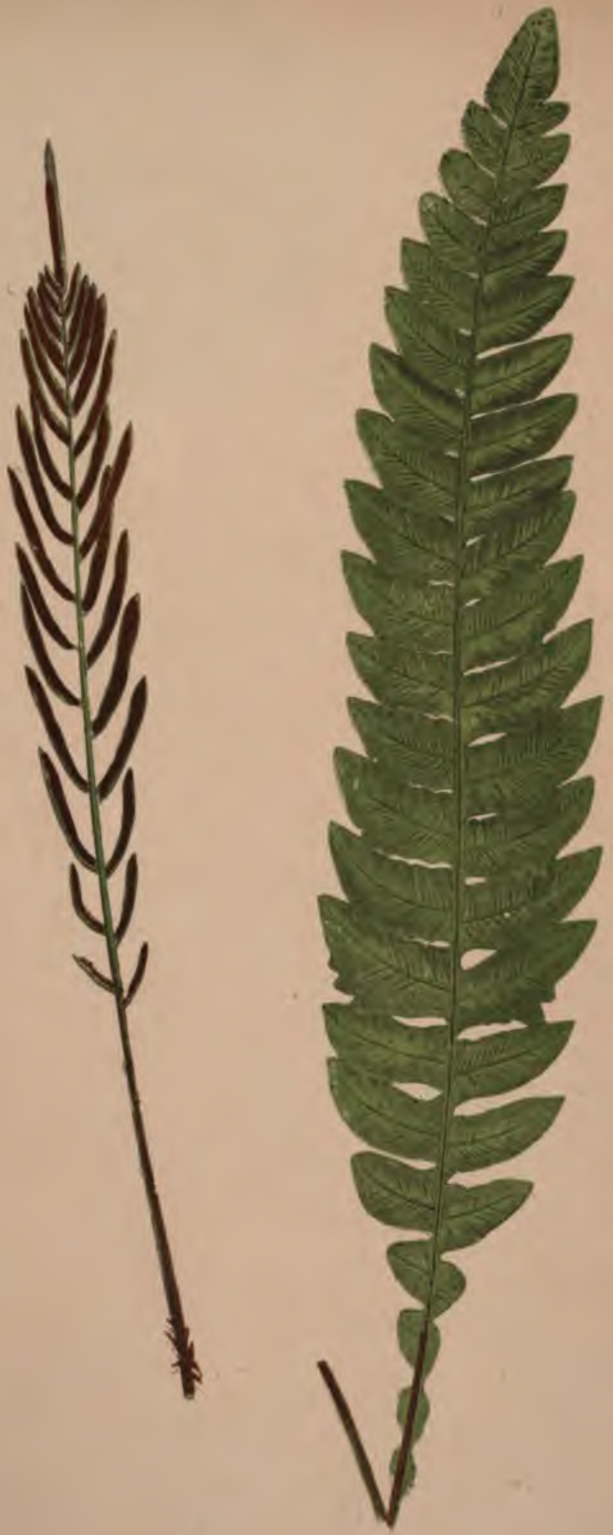
Mr. Moore remarks that on the Organ Mountains this species produces a thick caudex, four feet high, which, with the fronds at the top, have much resemblance to some species of *Zamiæ*.

Length of frond twenty-four inches; colour deep green.

My thanks are due to Mr. Veitch, of the Exotic Nursery, Chelsea, and to Messrs. E. G. Henderson, of the Wellington Nursery, for plants of this species; and to M. Schott, of the Imperial Gardens of Schonbrünn, for fronds.

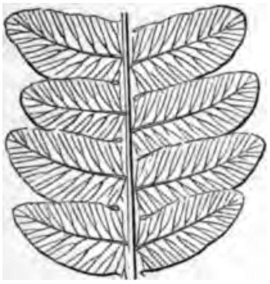
It is in the Catalogues of Messrs. Sim, of Foot's Cray; Rollisson, of Tooting; Veitch, of Chelsea; E. G. Henderson, of St. John's Wood; A. Henderson, of Pine-apple Place; and Young, of Taunton.

The illustration is from a plant in my own collection.



LOMARIA L'HERMINIERI.—FERTILE AND BARREN.

LXIII—VOL. 4.



Portion of sterile Frond—under side.

LOMARIA L'HERMINIERI.

BORY. KUNZE. SMITH.

PLATE LXIII. VOL. IV.

Lomaria—From *Loma*—an edge, in reference to the position of the spore cases on the fronds. *L' Herminieri*—Named after L'Herminier.

THIS rare and interesting species is almost unknown to Fern cultivators in this country. It is a dwarf species.

An evergreen stove Fern.

Native of Tropical America.

The fronds, which are pinnate, have the pinnæ opposite or sub-opposite. The sterile frond is equal in width except near the base and apex, where it becomes attenuated, and indeed very suddenly so at the base, where the pinnæ have more the character of decurrent segments. Pinnæ crowded, sessile, half an inch in length, and having the apex somewhat rounded.

Fertile frond very much contracted, somewhat erect, and the pinnæ linear.

Veins forked.

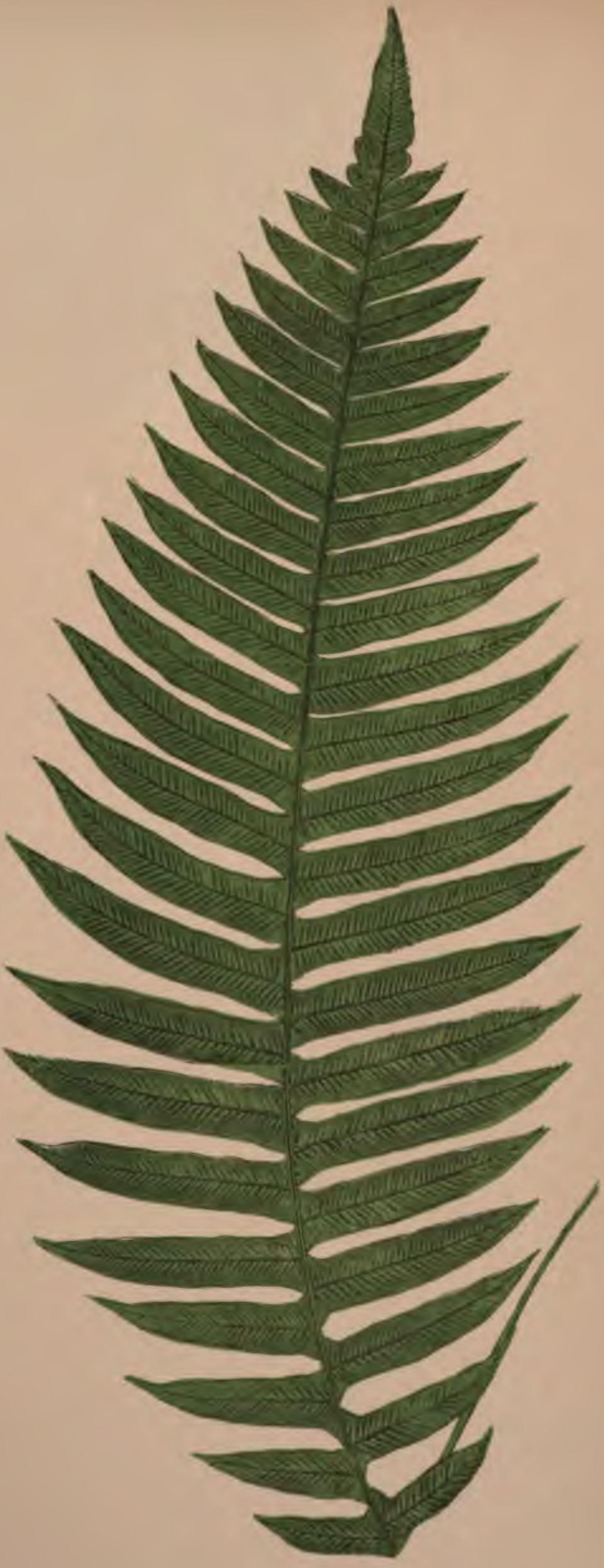
Stipes and rachis fluted above and rounded beneath.

Length of frond six or seven inches.

For fronds of this species my thanks are due to Sir W. J. Hooker, Director of the Royal Gardens, Kew.

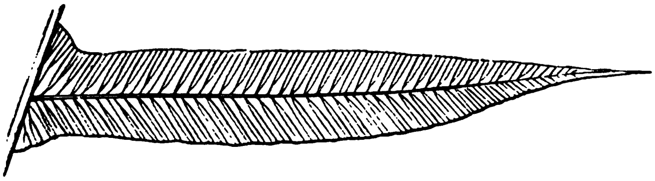
It may be procured of Messrs. Booth, of Hamburg.

The illustration is from Sir W. J. Hooker's fronds.



LOMARIA ATTENUATA.

LXIV—VOL. 4.



Pinna of sterile Frond—under side.

LOMARIA ATTENUATA.

LINK. J. SMITH, (*Not of* WILLDENOW *nor* SPRENGEL.)

PLATE LXIV. VOL. IV.

Lomaria—From *Loma*—an edge, in reference to the position of the spore cases on the fronds. *Attenuata*—Attenuated.

A VERY handsome stove species, and easily cultivated.

Native of the Mauritius and Brazil?

Sterile frond lanceolate, pinnate, pinnæ alternate, segments adnate, acuminate, with a sharp-pointed apex; largest in the centre of the frond, where they are two inches in length, and gradually becoming smaller, till at the apex they are only half an inch in length, whilst the terminal pinna is two inches long. Margin entire.

Fertile frond pinnate, pinnæ linear-acuminate.

Fronds terminal or lateral, adherent to a slender caudex, often erect, and attaining a height of two feet.

Stipes and rachis smooth.

Veins forked.

Sori linear and continuous.

Length of frond from twelve to twenty-four inches.

My obligations are due to Mr. Joseph Henderson, of Wentworth, for a plant of this species; and to Mr. Smith, of Kew; Mr. Sim, of Foot's Cray; and Mr. Norman, of Hull, for fronds.

It is in the Catalogues of Messrs. Sim, of Foot's Cray; Rollisson, of Tooting; A. Henderson, of Pine-apple Place; E. G. Henderson, of St. John's Wood; Veitch, of Chelsea; Stansfield, of Todmorden; Kennedy, of Covent Garden; and Booth, of Hamburg.

The illustration is from a plant in my own collection.

ADDENDA.

ADIANTUM.

Add to Sir W. J. Hooker's Catalogue, on page 59, vol. 3.—109.—***Parishii***, Hooker. Malay.

PLATYLOMA TERNIFOLIA. Page 69, vol. 3.

Pteris ternifolia,	Presl.
" *verticillata,*	Swartz. Willdenow. Presl.
Platyloma ternifolium,	Brackenridge.

Found also in Peru, Caraccas, Chili, and Sandwich Islands.

PLATYLOMA FLEXUOSA. Page 71, vol. 3.

Pellæa flexuosa,	Link. Hooker.
Platyloma flexuosum,	J. Smith.

Venezuela and Mexico.

PLATYLOMA ROTUNDIFOLIA. Page 67, vol. 3.

Pteris rotundifolia,	Swartz. Schkuhr. Hooker.
" *oblongifolia,*	Colenzo.

PLATYLOMA CALOMELANOS. Page 73, vol. 3.

Isle of Bourbon and North West India.

PLATYLOMA GERANIIFOLIA. Page 75, vol. 3.

Sir W. Hooker gives the following synonymes:—

Pellæa geraniæfolia,	Fee. Hooker.
" *pedata,*	Fee.
" *palmescens,*	Fee.
Pteris pedatoides,	Desvaux.
" *mysorensis,*	Heyne.
" *concolor,*	Langsdorff and Fischer.

Venezuela, Columbia, Madagascar, Cape of Good Hope, and Mauritius.

PLATYLOMA SAGITTATA. Page 77, vol. 3.

Pellæa cordata,	Hooker. (*Not of* Fee.)
Allosorus cordatus,	Presl. Kunze. Hooker.
Pteris cordata,	Willdenow. (*Not of* Sieber.)

PLATYLOMA BROWNII. Page 79, vol. 3.

Sir W. Hooker, under *Pellæa paradoxa,* gives the following synonymes:—

Pellæa paradoxa,	Hooker.
" *cordata,*	Fee, (*Not of* Hooker.)
Adiantum paradoxum,	Brown.
Pteris cordata,	Sieber.

PLATYLOMA ATROPURPUREA. Page 81, vol. 3.

Pellæa atropurpurea,	Hooker.
Pteris atropurpurea,	Michaux. Swartz. Schkuhr.
" "	Willdenow.
" *gracilis, ? nana,*	Richardson, (*Not* Michaux.)

In Subarctic America, between N. lat. 54° and 64°, this species only grows an inch high.

PLATYLOMA FALCATA. Page 83, vol. 3.

Pellæa falcata,		Hooker.
" " var. *setosa,*		Hooker.
Pteris seticaulis,	The var. *setosa,*	Hooker.
" *alternifolia,*		Wallich.

New Zealand, India, etc.

PLATYLOMA HASTATA. Page 87, vol. 3.

Pellæa hastata,	Hooker.
Pteris hastata,	Willdenow.
" *auriculata,*	Thunberg.
" *adiantoides,*	Willdenow.
" *polymorpha,*	Poiret.
" *hastæfolia,*	Schrader.
" *spiculata,*	Schkuhr.
" *macrophylla,* (var.)	Hooker.
" *stenophylla,* (var.)	Hooker.

Madagascar, Mauritius, and Bourbon.

Sir W. Hooker joins *Platyloma adiantoides* to this species.

Sir W. J. Hooker, in his "Species Filicum," gives the following species of *Platyloma* under *Pellæa:*—

Pilosa, *Hooker.* Bourbon.
Geraniæfolia, *Fee.* Brazil.
Lomariacea, *Hooker.* Brazil.
Tamburii, *Hooker.* Nepal.
Bojeri, *Hooker.* Madagascar.
Boivini, *Hooker.* Africa.
Robusta, *Hooker.* South Africa.
Cordata, *J. Smith.* Mexico.

Paradoxa, *Hooker*. New South Wales.
Falcata, *Fee*. New South Wales.
Rotundifolia, *Hooker*. New Zealand.
Doniana, *Hooker*. Western Africa.
Gracilis, *Hooker*. North America.
Atro-purpurea, *Link*. North America
Dura, *Hooker*. Mauritius.
Calomelanos, *Link*. South Africa.
Auriculata, *Link*. South Africa.
Seemanii, *Hooker*. Mexico.
Skinneri, *Hooker*. Guatemala.
Ternifolia, *Fee*. Peru.
Wrightiana, *Hooker*. New Mexico.
Longimucromata, *Hooker*. N. Mexico.
Ornithopus, *Hooker*. California.
Rigida, *Hooker*. Peru.
Consobrina, *Hooker*. South Africa.
Hastata, *Link*. South Africa.
Flexuosa, *Link*. Peru.
Andromedæfolia, *Fee*. California.
Pulchella, *Fee*. Mexico.
Densa, *Hooker*. California.
Nudiuscula, *Hooker*. New Holland.
Decomposita, *Hooker*. Mexico.
Hirsuta, *Hooker*. Chili.
Bridgesii, *Hooker*. California.

DUBIOUS SPECIES.

Allosorus involutus, *Presl*. Cape of Good Hope.
domingensis, *Presl*.
aurantiacus, *Presl*. New Spain.
sulphureus, *Presl*. New Spain.
farinosus, *Kunze*.

PTERIS LONGIFOLIA. Page 117, vol. 3.

Sir W. J. Hooker gives the following synonymes:—

Pteris costata,	WILLDENOW. HOOKER & ARNOTT.
" *obliqua*,	FÖRSKAL.
" *lanceolata*,	DESFONTAINES.
" *alpinii*,	DESVAUX.
" *semihirta*,	LINK.
" *acuminatissima*,	BLUME.
" *amplectens*,	WALLICH. AGARDH.
" *diversifolia*,	SWARTZ. AGARDH.
" *trapezoides*,	BURMANN.
" *microdonta*,	GAUDICHAUD.
" *tenuifolia*,	BRACKENRIDGE.
" *indica*,	POIRET.
" *inæquilateralis*,	POIRET.
" *guichenotiana*,	GAUDICHAUD. DECAISNE.
" *æqualis*,	PRESL.
" *bahamensis*,	FEE. PLUMIER.
" *stipularis*,	LINNÆUS. SWARTZ. WILLDENOW.

Found also in the East Indies, Arabia, Mauritius, Bourbon, Algeria, Spain, Canary Isles, Abyssinia, Cuba, St. Domingo, Bahamas, Africa, Cape de Verd, Mexico, Ceylon, China, Malay Archipelago, Malacca, Java, Pacific Islands, South Australia, Venezuela, etc.

PTERIS CRETICA. Page 119, vol. 3.

Pteris cretica,	Swartz.
“ *semiserrata,*	Förskal.
“ *læta,*	Wallich.
“ *heterophyllus,*	Poiret. Schkuhr.
“ *pentaphylla,*	Willdenow.
“ *nervosa,*	Thunberg. Wallich.
“ *multiaurita,*	Agardh.
“ *triphylla,*	Martens and Galleotti.
“ *stenophylla,*	Hooker & Greville. Agardh.
“ *digitata,*	Wallich.
“ *angusta,*	Wallich.
“ *tæniosa,*	J. Smith.

Found also in Persia, Abyssinia, Java, Guatemala, and South America.

PTERIS VESPERTILIONIS. Page 121, vol. 3.

Sir W. Hooker, under the name of *Pteris incisa,* Thunberg, gives the following additional synonymes:—

Pteris incisa,	Thunberg. Hooker. Swartz.
“ “	Willdenow. Blume. Agardh.
“ “	Schlechtendal. Pappe & Rawson.
“ *elegans,*	Swartz. Agardh.
“ *cruciata,*	Kaulfuss. Agardh.
“ *pallida,*	Raddi.
“ *nivea,*	Blume.
“ *vespertilionsis,*	Willdenow. Brown. Agardh. Hooker.
“ *australasica,*	Desvaux.
“ *flavescens,*	Colla.
Litobrochia appendiculata,	Gay.

Found also in Ascension Island, Cape of Good Hope, India, Otaheite, Juan Fernandez, Galepagos, Jamaica, West Indies, South America, New Granada, etc.

A variety known as var. *gigantea* is scandent, and grows thirty feet long.

PTERIS TREMULA. Page 123, vol. 3.

Pteris tremula,	Hooker. Agardh.
“ *affinis,*	A. Cunningham.
“ *tenuis,*	A. Cunningham.

PTERIS CRENATA. Page 129, vol. 3.

Pteris crenata,	Willdenow. Brown. Agardh.
" *ensiformis,*	Wallich.
" *multidentata,*	Wallich.
" *caudata,*	Loureiro.
" *heterodactyla,*	Reinwardt. J. Smith. Burmann.

Ceylon.

PTERIS GRANDIFOLIA. Page 131, vol. 3.

Pteris grandifolia,	Swartz. Willdenow. Agardh.
Litobrochia ampla,	Presl.
" *schiedeana,*	Presl.
Heterophlebium grandifolium,	Fee. Plumier. Sloane.

Tropical America, West Indian Islands, Venezuela, and Mexico.

PTERIS BIAURITA. Page 133, vol. 3.

Pteris biaurita,	Willdenow. Blume. Belanger.
" "	Wallich. Agardh. (*Not of* Swartz *nor* Link.)
" *geminata,*	Argardh.
" *kleiniana,*	Presl. Plumier.
Campteria biaurita,	Hooker.
" *rottleriana,*	Presl.

East Indies, West Africa, Ceylon, Guadaloupe, Brazil, and Mauritius.

PTERIS DENTICULATA. Page 1, vol. 4.

Pteris denticulata,	Willdenow.
" *tristicula,*	Raddi.
" *reticulata,*	Desvaux.

Native also of Cuba and Hispaniola.

Sir W. J. Hooker looks upon the *Pteris brasiliensis* of Raddi as a distinct species.

PTERIS FELOSMA. Page 3, vol. 4.

Sir William Hooker considers this identical with the *Pteris quadriaurita* of Retzius; add, therefore, the following:—

Pteris quadriaurita,	Retzius. Willdenow.
" *nemoralis,*	Hooker.
" *biaurita,* var.	Swartz.
" *calcarata,*	Bory.
" *subquinata,*	Wallich. Agardh.

Ceylon, East Indies, Senegambia, Fernando Po, Madagascar, Pacific Islands, Mexico, Peru, Guatemala, Panama, Brazil, New Granada, and Caraccas.

PTERIS AQUILINA. Page 5, vol. 4.

Pteris aquilina,	Swartz. Willdenow. Agardh.
" *caudata,*	Schkuhr. Hooker and Arnott.
" "	Jacquin. Swartz. Willdenow.
" "	Agardh. Plumier. Sloane.
" *latiuscula,*	Desvaux.
" *lanuginosa,*	Kaulfuss. Agardh.
" *capensis,*	Swartz. Schlechtendal. Kaulfuss.
" *decomposita,*	Gaudichaud.
" *esculenta,*	Forster. Swartz. Willdenow.
" "	Schkuhr. Labillardiere. Brown.
" "	Blume. Endlicher. Agardh.
" *aquilina,* var. *esculenta,*	Hooker.
" *semihastata,*	Wallich. Agardh.
" *densa,*	Wallich.
" *lorigera,*	Wallich.
" *arachnoidea,*	Kaulfuss. Kunze. Agardh.

Sir William Hooker gives four forms of the *Pteris aquilina,* namely, *glabra, lanuginosa, caudata,* and *esculenta.*

The form *glabra* is our *Pteris aquilina,* and it occurs also in Northern Asia and North America. In the Highlands of Scotland it is found two thousand feet above the sea level, growing in sheltered situations to the height of six feet; whilst on Helvelyn, at the same elevation, it scarcely attains as many inches. Messina, Madeira, Cape of Good Hope, China, Java, Guatemala, and Brazil.

The form *lanuginosa* in Scotland, Sweden, India, Jamaica, Madeira, Teneriffe, Algeria, Senegambia, Fernando Po, Cape of Good Hope, Sandwich Islands, and North West America.

The form *caudata* in the West Indies, St. Domingo, Cuba, Jamaica, and Venezuela.

The form *esculenta* in the Society Islands, New Zealand, Australia, Tasmania, Norfolk Island, Feejee Islands, Jamaica, Venezuela, Guiana, Galipagos, Peru, Brazil, India, Borneo, and the Indian Archipelago.

PTERIS HIRSUTA. Page 7, vol. 4.

Sir W. Hooker, under the name of *Pteris laciniata,* gives some additional synonymes.—

Pteris laciniata,	Schkuhr. Leibmann.
" *villosa,*	Swartz.

Mexico and Venezuela.

PTERIS LATA. Page 11, vol. 4.

Under the name of *Pteris flabellata,* Sir W. Hooker gives as additional synonymes,—

Pteris flabellata,	THUNBERG. SWARTZ. WILLDENOW. AGARDH.
" *elegans,*	JACQUIN.
" *arguta,*	SCHLECHTENDAL. KUNZE. (*Not of* AITON, VALH, SWARTZ, AGARDH, WILLDENOW, *or* WEBB.)
" *ascensionis,*	SWARTZ. SCHKUHR. WILLDENOW.
Lonchitis ascensionis,	FORSTER.

South Africa, St. Helena, Abyssinia, and Island of Ascension.

PTERIS MACROPTERA. Page 13, vol. 4.

Under the name of *Pteris elata,* Sir W. Hooker adds the following synonymes:—

Pteris elata,	AGARDH.
" *macroptera,*	KLOTZSCH.

It is a native of Panama and Caraccas.

Sir W. J. Hooker, in his "Species Filicum," gives a goodly list of the genus *Pteris,* as the annexed Catalogue will show.

Longifolia, *Linnæus.* Widely spread.
Moluccana, *Blume.* Java.
Opaca, *J. Smith.* Philippine Islands.
Cretica, *Linnæus.* Widely spread.
Dactylina, *Hooker.* Nepal.
Pellucida, *Presl.* India.
Umbrosa, *Brown.* Australia.
Venulosa, *Blume.* Java.
Aspera, *Fee.* Isle of Bourbon.
Crenata, *Swartz.* East Indies.
Multilata, *Linnæus.* West Indies.
Hookeriana, *Agardh.* Ceylon.
Scabripes, *Wallich.* Penang.
Prionitis, *Hooker.* Philippine Islands.
Heterophylla, *Linnæus.* West Indies.
Laurea, *Desvaux.* Madagascar.
Heteromorpha, *Fee.* Luzon.
Serrulata, *Linnæus.* China.
Luxuriosa, *Kunze.* Manilla.
Melanocaulon, *Fee.* Philippine Islands.
Distans, *J. Smith.* Luzon.
Semipinnata, *Linnæus.* India.
Dalhousiæ, *Hooker.* Java.
Griffithii, *Hooker.* East Indies.
Madagascarica, *Agardh.* Madagascar.
Coriifolia, *Kunze.* Cape of Good Hope.
Psittacina, *Presl.* Rio Janeiro.
Scalaris, *Moritz.* Jamaica.
Grandifolium, *Linnæus.* Tropical America.
Nemoralis, *Willdenow.* India.
Biaurita, *Linnæus.* East Indies.
Gallcotti, *Fee.* Mexico.
Amœna, *Blume.* Java.
Atrovirens, *Willdenow.* Africa.
Armata, *Presl.* Island of Sorzogon.
Triplicata, *Agardh.* Madagascar.
Pseudolonchitis, *Bory.* Bourbon.
Wallichiana, *Agardh.* East Indies.
Gardneri, *Fee.* Ceylon.
Sagittifolia, *Raddi.* Brazil.
Pedata, *Linnæus.* West Indies.
Decipiens, *Hooker.* Sandwich Islands.
Decora, *Brackenridge.* Sandwich Islands.
Ludens, *Wallich.* Irawaddy.
Splendens, *Kaulfuss.* Brazil.
Chrysodioides, *Fee.* South America.
Papyracea, *Fee.* South America.
Lanceæfolia, *Agardh.* Madagascar.

Triphylla, *Agardh*. Madagascar.
Semidentata, *Fee*. New Granada.
Gracilis, *Fee*. Brazil.
Irregularis, *Kaulfuss*. Sandwich Isles.
Scaberula, *Richard*. New Zealand.
Tremula, *Brown*. New Holland.
Chilensis, *Desvaux*. Chili.
Laciniata, *Willdenow*. Mexico.
Marattiæfolia, *Hooker*. Ceylon.
Patens, *Hooker*. Ceylon.
Litobrochioides, *Kaulfuss*. British Guiana.
Longipinnula, *Wallich*. Penang.
Quadriaurita, *Retzius*. Widely spread.
Pungens, *Willdenow*. Martinique.
Deltea, *Agardh*. Otaheite.
Excelsa, *Gaudichaud*. East Indies.
Ligulata, *Gaudichaud*. Mollucca.
Arguta, *Aiton*. Arabia.
Flabellata, *Thunberg*. South Africa.
Paleacea, *Roxburgh*. St. Helena.
Scabra, *Bory*. Mauritius.
Swartziana, *Agardh*. West Indies.
Kingiana, *Endlicher*. Norfolk Island.
Trattinickiana, *Endlicher*. Norfolk Island.
Pyrophylla, *Blume*. Java.
Catoptera, *Kunze*. Port Natal.
Novæ Caledoniæ, *Hooker*. New Caledonia.
Crœsus, *Bory*. Bourbon.
Aspera, *Lamarck*. Cayenne.
Deflexa, *Link*. Brazil.
Gaudichaudii, *Agardh*. Brazil.
Pellucens, *Agardh*. East Indies.
Stridens, *Agardh*. Jamaica.
Coriacea, *Desvaux*.
Jamesoni, *Hooker*. Quito.
Muricata, *Hooker*. Tropical America.
Muricella, *Fee*. Mexico.
Paucinervata, *Fee*. Mexico.
Aquilina, *Linnæus*. Widely spread.
Pulchra, *Schlechtendal*. Mexico.
Hænkeana, *Presl*. Peru.
Burkeana, *Hooker*. South Africa.
Articulata, *Kaulfuss*. Mauritius.
Brasiliensis, *Raddi*. Brazil.
Denticulata, *Swartz*. Hispaniola.
Leptophylla, *Swartz*. Brazil.
Gigantea, *Willdenow*. Caraccas.
Crassipes, *Agardh*. West Indies.
Berteroana, *Agardh*. Juan Fernandez.
Endlicheriana, *Agardh*. Norfolk Island.
Comans, *Forster*. New Zealand.
Macilenta, *A. Cunningham*. New Zealand.
Woodwardioides, *Bory*. Mauritius.
Decurrens, *Presl*. Brazil.
Spinulifera, *Schumacher*. Africa.
Kunzeana, *Agardh*. Martinique.
Elata, *Agardh*. Panama.
Propinqua, *Agardh*. Jamaica.
Hemipteris, *Fee*. Mexico.
Setifera, *Fee*. Mexico.
Aculeata, *Swartz*. West Indies.
Tripartita, *Swartz*. East Indies.
Podophylla, *Swartz*. Jamaica.
Longibrachiata, *Agardh*. West Indies.
Microdictyon, *Fee*. Philippine Islands.
Borbonica, *Fee*. Bourbon.
Montbrisonis, *Fee*. Bourbon.
Camptocarpa, *Fee*. Columbia.
Tussaci, *Fee*. St. Domingo.
Grandis, *Fee*. Mexico.
Incisa, *Thunberg*. Cape of Good Hope.
Aurita, *Blume*. Java.
Sinuata, *Brackenridge*. Feejee Islands.
Currori, *Hooker*. Africa.
Stipulacea, *Hooker*. Borneo.
Latifolia, *Hooker*. Venezuela.

It will be seen that *Doryopteris* is included in this Catalogue.

In the above list there are many species not yet introduced into this country as living plants.

CONTRIBUTORS TO VOL. IV.

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AUTHORITIES QUOTED IN VOL. IV.

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Arnott
Arrabida
Babington
Balbis
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Beevor
Belanger
Bernhardi
Berthelot
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Heyne
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Hooker, Sir W. J.
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Wallich
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Webb
Weis
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Willdenow
Withering
Woodward
Wollaston

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[Those Ferns having *an authority* attached, are the respective names adopted in this Work, of which a description, together with a coloured illustration, and one or more woodcuts are given. Names not having an authority attached, are those adopted by other authors, and are therefore to be found under other names. It sometimes happens that the same name is used by different authors for different species: this will at once be seen by referring to each page given in the index.]

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